Owen Sound District Fisheries Management Plan

1986 - 2000

DRAFT

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Ontario
Ministry of Natural Resources
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PREFACE

This fisheries management plan was prepared under the general context of the Owen Sound District Land Use Guidelines and provides the long term management direction (1986-2000) for both inland and Great Lakes fisheries within the Owen Sound District.

The purpose of this management plan is to state fisheries management objectives and detail specific strategies and tactics designed to achieve those targets by a specified date. To that end, the fisheries management plan is comprised of resource information, management strategies and the first five year implementation schedule. The implementation schedule outlines the operational tactics designed to implement the management strategies.

This plan is designed to provide guidance to local fisheries managers as well as indicate future management direction to the public.

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District Manager

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Regional Director

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1.0 INTRODUCTION

1.1 PURPOSE

The Owen Sound District, of the Ontario Ministry of Natural Resources, encompasses a land area of 761,015 hectares comprised of the County of Grey and, with the exception of Carrick, Culross, Kinloss and Huron townships, the County of Bruce (Figure 1). The Owen Sound District also includes an inland water area of approximately 13,864 hectares and a total of 1,288,200 hectares of Lake Huron and Georgian Bay waters.

The purpose of this fisheries management plan is to outline long term fisheries management direction and identify specific short term (5 year) management activities to be carried out on both inland and Great Lakes waters within the Owen Sound District.

1.2 PLANNING PROCESS

This fisheries management plan was developed as part of the Ministry of Natural Resources integrated resource management planning system.

The Southern Ontario Coordinated Program Strategy (S.O.C.P.S.) provided general policies, targets and guidelines for resource management within southern Ontario.

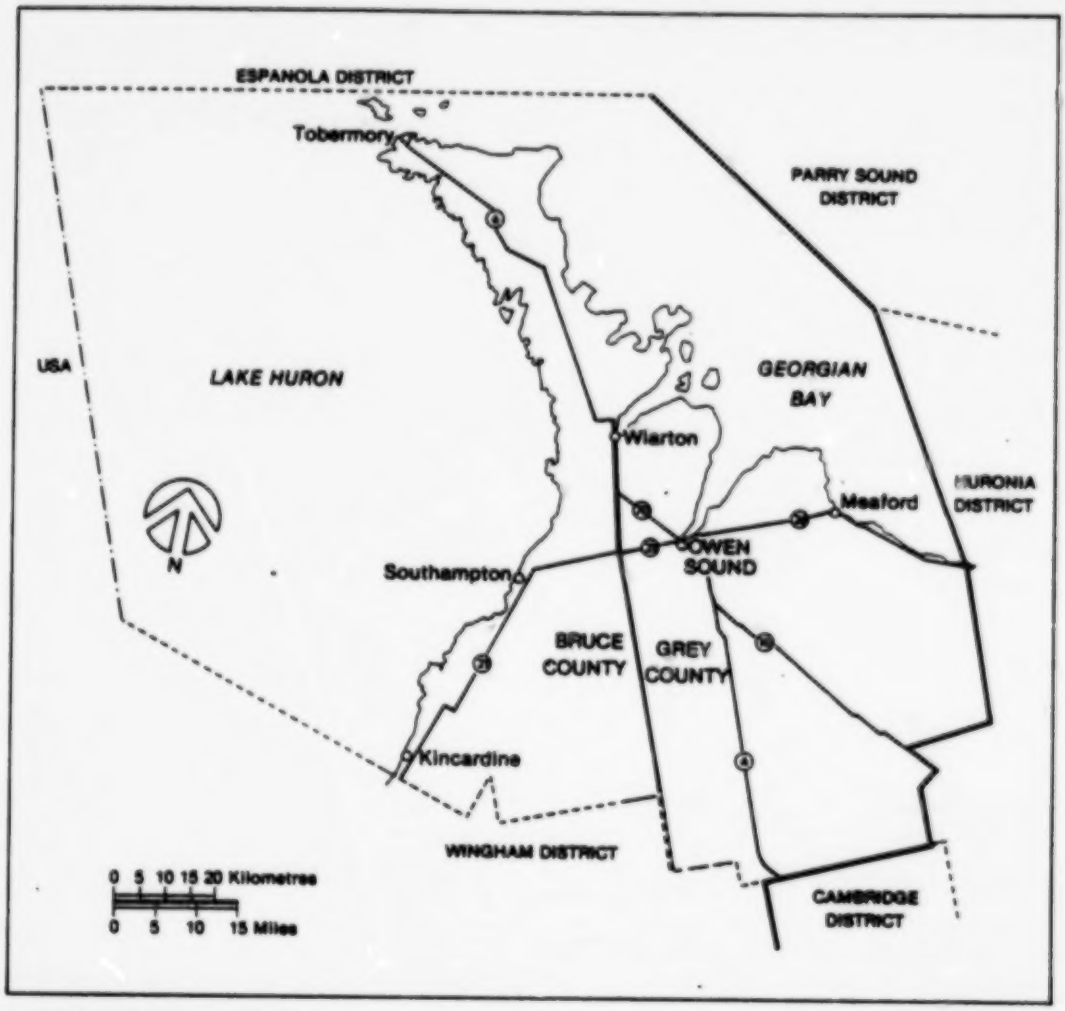
The Owen Sound District Land Use Guidelines (D.L.U.G.) defined resource management targets within the Owen Sound District and presented strategies for achieving those targets.

The Owen Sound District Fisheries Management Plan falls under the general framework of the District Land Use Guidelines but provides more detail regarding management strategies for achieving fisheries targets.

The Lake Huron Strategic Fisheries Management Plan (M.N.R., 1986) provides the general direction for fisheries management in the Owen Sound District waters of Lake Huron and Georgian Bay.

The planning process also includes direct public consultation and involvement during

Figure 1: Owen Sound District Boundaries and Regional Setting



SOUTHWESTERN REGION

LEGEND

- District Boundary
- Region Boundary
- County Boundary
- International Boundary
- Owen Sound District

Ontario Ministry of Natural Resources

the formulation of the fisheries management plan. The results of public consultation to date have been summarized in additional documents (Kerr, 1985c; 1986).

This fisheries management plan includes a management implementation schedule which outlines tactics required to fulfill fisheries management objectives over the next five year period. Annual fisheries work plans will be formulated in accordance with this implementation schedule.

1.3 EXISTING POLICY AND TECHNICAL DIRECTION

This plan adheres to current Ministry of Natural Resources policies and is founded on an integrated resource management approach.

The integrated resource management approach encourages multiple use but coordinates various programs to ensure that conflicts are minimized and management programs that benefit several programs are encouraged.

An integrated approach to fisheries management is critical since numerous other issues have a direct impact on local fisheries.

Strategies are based upon accepted resource management principles, presented in Strategic Planning for Ontario Fisheries (S.P.O.F.) documents, and current technology.

It is important to realize that this management plan only highlights the results of many studies and planning exercises.

A number of background documents were utilized in the formulation of this fisheries management plan.

These documents are available at the Owen Sound District office and include:

(i) Fisheries Planning Guidelines (Munroe et al., 1984)- formulation of management goals, strategies and tactics for Owen Sound District fisheries.

(ii) Fisheries Management Guidelines for the Saugeen River (Munroe, 1982) - management guidelines for fisheries within the Saugeen River watershed.

(iii) Terms of Reference (Kerr, 1985b) - outlines the planning process and provides a timetable for the completion of each phase.

(iv) Fisheries Background Information (Kerr, 1985a) - detailed synthesis of all background information including problems and issues, fisheries yields, current and projected resource use and current fisheries management practices.

(v) Summary of Background Information and Optional Management Strategies (M.N.R., 1985b) - public document summarizing background information, highlighting problems and issues and presenting optional fisheries management strategies.

(vi) Summary of Background Information Open House (Kerr, 1985c) - summary and evaluation of the first public open house on problems/issues and optional management strategies.

(vii) Summary of Questionnaires and Public Response (Kerr, 1986) - results of public comment on the background information/optional management strategy phase of the planning process.

2.0 DISTRICT FISHERIES PERSPECTIVE

2.1 THE FISHERIES RESOURCE

With the exceptions of Carrick, Culross, Kinloss and Huron Townships, the Owen Sound Administrative District is comprised of Grey and Bruce Counties in southwestern Ontario.

The major physiographic feature, the Niagara Escarpment, subdivides the area into Lake Huron and Georgian Bay drainage systems comprised of four watersheds: Bruce Peninsula streams, fourteen Georgian Bay tributaries, the Saugeen River and twenty-three Lake Huron tributaries.

The predominance of coldwater streams and rivers is another major feature of the Owen Sound District.

There are 111 coldwater streams and rivers (approximately 1500 km) which currently support salmonid populations. Due to their limestone base, most streams are characterized by slightly alkaline and extremely well buffered waters.

For the Georgian Bay watershed, the escarpment also serves to partition fish species with brook trout and brown trout populations generally being found in streams above the escarpment and migratory species, such as rainbow trout and chinook salmon, confined to waters below the escarpment.

In other instances, such as the Saugeen River system, dams have served to separate resident from migratory salmonid stocks.

There are relatively few (77) inland lakes within the Owen Sound District. The majority of these lakes are small and support either warmwater or coolwater fisheries.

A notable exception is Gillies Lake on the Bruce Peninsula, which represents the only inland lake in southwestern Ontario to support a resident population of lake trout.

Portions of both Lake Huron and Georgian Bay also fall within the boundaries of the

Owen Sound District.

These waters support commercial fisheries and also provide high quality angling opportunities for cold, cool and warmwater fish species.

In terms of individual fish species, rainbow trout is probably the most highly sought species by recreational anglers. Lake trout backcross and, more recently, chinook salmon also provide popular fisheries in Lake Huron and southern Georgian Bay.

Smallmouth bass and yellow perch provide the basis of a major recreational fishery along the west coast of the Bruce Peninsula.

Lake whitefish, deepwater cisco (chub) and yellow perch are the predominant species in the commercial catch from Owen Sound District waters of Lake Huron and Georgian Bay.

2.2 PRESENT AND POTENTIAL FISH YIELDS

Current and projected fish yields, to both the recreational and commercial fisheries, are presented in Table 2.1.

Definitions of current, projected and potential fisheries yields are presented in the Glossary of this document.

These fisheries yields were based upon the target species of each fishery and expressed in terms of the overall fish community. Where a particular fish species was sought by both the commercial and recreational fisheries, yield partitioning and allocations were completed (see Kerr, 1985a).

Current recreational fisheries yields are estimated to be 352,340 kilograms.

Approximately one quarter of this total is supplied by the coldwater fish community. In the recreational fishery this includes such species as rainbow trout, brown trout, brook trout, lake trout backcross and Pacific salmon.

Projections suggest that yields to the recreational fishery can be increased to 382.690 kilograms by the year 2000. This projected increase is due to an expansion of coldwater fish stocks in Lake Huron and Georgian Bay, as well as realizing a portion of potential yield from waters which are presently rated as under-producing.

Similarly, an increase in coarse fish and baitfish yields is also projected for under-producing waters.

Two data sources were employed to derive commercial fish yields from the Owen Sound District waters of Lake Huron and Georgian Bay.

For coldwater and coolwater target fish species, current quota allocations were utilized since they were believed to represent the best available yield estimates.

Although there will undoubtedly be fluctuations in individual fish stocks, these quotas were based upon past performance in addition to the estimated biological production

TABLE 2.1: CURRENT AND PROJECTED ANNUAL FISH YIELDS, BY COMMUNITY TYPE, FROM OWEN SOUND DISTRICT WATERS, 1986-2000.

	FISH COMMUNITY				
	COLDWATER	COOLWATER	WARMWATER	COARSE & BAITFISH	TOTAL
CURRENT YIELD[1.]					
(i) Sport Fishery[2.]	105.16	71.36	121.52	54.30	352.34
(ii) Commercial Fishery	902.35[4.]	18.88[4.]	9.07[3.]	528.45[3.]	1,458.75
TOTAL	1,007.51	90.24	130.59	582.75	1,811.09
PROJECTED YIELD[1.]					
(i) Sport Fishery	130.35	71.48	125.72	55.14	382.69
(ii) Commercial Fishery	902.35[4.]	18.88[4.]	9.07[3.]	528.45[3.]	1,458.75
TOTAL	1,032.70	90.36	134.79	583.59	1,841.44

LEGEND

1. Expressed in thousands of kilograms.
2. Values from background information document.
3. Based on the allowable biological catches from the Owen Sound District waters of Lake Huron and Georgian Bay.
4. Based on 1985 quota allocations.

and, as a result, should stabilize catches and maintain a viable industry in the future.

Since, for a given year, these values represent the maximum biological yield for individual fish species, major increases in yields to the commercial fishery are not anticipated. It should be realized however, that depending upon the abundance of various fish stocks, commercial fish quotas are subject to annual change if necessary.

In terms of the warmwater fishery as well as coarse fish and baitfish for which there were no quota allocations, estimates of the allowable biological catch were formulated.

2.3 CURRENT AND PROJECTED RESOURCE USE

Based on the most recent (1980) provincial angler survey, it was estimated that Owen Sound District waters currently provide 1,537,000 angler days (opportunities) of recreation. On this basis, the projected use by the year 2000 would be 1,842,272 recreational angling opportunities annually.

The accuracy of the aforementioned current and projected resource use estimate is questionable, however, since tests have indicated that the provincial angler survey results tend to over-estimate participation rates at the local (district) level. Unfortunately, it is not possible to quantify the extent of this over-estimate.

Assuming the preceeding assumption is correct, the current number of angling opportunities is probably somewhat less than the long term target of 1,046,150 opportunities (see page 15).

Local waters are renowned for their coldwater (salmonid) fisheries which presently supply the bulk of these angling opportunities within southwestern Ontario.

Ontario residents account for over 98% of the current estimated angling effort expended within Owen Sound District waters. In terms of resident angling effort, the Owen Sound District ranks fourth in the Province of Ontario.

On the basis of the perceived supply and projected demand, it is felt that inland waters

will not be able to sustain a major increase in fishing pressure. Instead, the bulk of increased angling opportunities must be realized from the Owen Sound District waters of Lake Huron and Georgian Bay.

There are presently 21 commercial (food) fishing licences and 105 baitfish licences within the Owen Sound District.

The number of commercial fishing licences is not expected to increase over the next fifteen year period as entry to the commercial fishery will be limited.

It is anticipated that both participation in the baitfish industry and baitfish harvest will increase by the year 2000.

2.4 NON FISHERIES DATA

A considerable amount of other (non fisheries) information must be taken into consideration when formulating a fisheries management plan.

There are presently between 200-300 dams on Owen Sound District streams and rivers. Dams serve to alter fish habitat, restrict fish movements and partition various fish species in different portions of a stream.

Water levels in some streams and lakes may be manipulated by power generating facilities. For example, an Ontario Hydro generating station on Eugenia Lake often results in significant water level fluctuations downstream in the Beaver River.

Due to its warmwater effluent, the Bruce Nuclear Generating Station at Douglas Point has a major influence on the local fish community in Lake Huron.

Land use practices, such as agricultural activities, deforestation, mineral extraction and urban development, may have a significant impact on local fisheries.

Any form of pollution, whether agricultural or industrial, could alter water quality or fish habitat thereby reducing potential fish yields.

2.5 PROBLEMS AND ISSUES

Problems and issues have been detailed in the background information document. In addition, a number of problems and issues were also identified during the first phase of public consultation (Kerr, 1986).

Basically, problems and issues may be summarized under four general categories:

(i) Loss of Fish and Fishing Opportunities

The loss of individual fish stocks could arise from a number of causes including over-exploitation, illegal harvest, inadequate sources of hatchery reared fish or the introduction of some non-indigenous species.

The problem of over-harvest is perhaps most evident in some inland waterbodies or isolated sections of Lake Huron and Georgian Bay while illegal harvest is most predominant in Lake Huron - Georgian Bay tributaries during the spring and fall run of migratory salmonids.

Inadequate sources of hatchery reared fish affects both inland and Great Lakes waters.

While the depletion or loss of fish stocks ultimately reduces fishing opportunities and associated economic benefits, many other factors, such as access limitations, also reduce angling opportunities. This is becoming particularly evident on many inland streams and rivers whose landowners prohibit access to fishermen.

(ii) Loss of Environmental Quality

The degradation of fisheries habitat has an obvious impact on the resident fishery and may ultimately result in the loss of fish stocks and fishing opportunities. In addition, the presence of contaminants may render fish flesh unsuitable for human consumption.

Habitat loss or degradation can arise from a number of sources.

The abundance of dams on many inland streams has undoubtedly impaired the quality of coldwater fisheries habitat.

Conflicting land and water uses often have profound effects on fisheries habitat. Excessive shoreline development has created problems, in terms of reducing habitat quality, in many inland lakes. Agricultural land use activities have resulted in deteriorated fisheries habitat in many streams and rivers in southern Grey and Bruce Counties.

Other conflicting land and water uses which may have adverse impacts on both water quality and fisheries habitat include aggregate extraction, industrial activities, timber extraction and municipal development.

(iii) Conflicts Among Users of the Environment and the Resource.

While user conflicts arise between both consumptive and non consumptive users of the resource, perhaps the most noteworthy user conflicts exist between the commercial, native Indian and recreational fishermen.

These conflicts were evidenced during the first public open house when the issues of commercial gill netting and a proposed fish processing plant on the Cape Croker Indian Reserve were raised.

In addition there may also be conflicts between the users of the resource and users of the environment.

(iv) Lack of Public Awareness and Insufficient Scientific Knowledge

Generally, there seems to be a lack of understanding among the public regarding the complexity of managing a fishery and its users.

In many instances, unrealistic demands are placed upon the resource while in other instances there has been a general lack of recognition regarding fisheries concerns in municipal planning.

Fisheries managers are often hampered by inadequate knowledge or scientific data regarding such items as fisheries productivity and yields, characteristics of resource users and long term species interactions.

The acquisiton of better information may be limited or delayed by the lack of funding and manpower.

The lack of funding for fisheries management programs as well as the shortage of enforcement staff were two problems which were also identified during the first period of public consultation. The public also indicated that they favoured the implementation of a resident angling licence which could be utilized to generate additional funds for these purposes.

If the projected demands on the fisheries resource are to be met and fisheries targets are to be achieved a number of these problems must be resolved.

Resident fish stocks must be protected from over-exploitation, illegal activities and the introduction of non indigenous species.

Fisheries habitat must be protected from further deterioration. Degraded habitat must be enhanced to realize fish yields from under-producing waters.

Shoreline developments and water related activities should be integrated in a manner that is compatible with the maintenance of healthy fish communities.

Conflicts among and within various resource user groups must be resolved.

Efficient management of local fish populations is hampered somewhat by an incomplete understanding of fish productivity and allowable yields, fish community interactions and reliable harvest estimates. Future research efforts should be directed to examine these information needs.

Finally, there is a need for expanded public information and education regarding the principles and fundamentals of aquatic ecosystems and fish population dynamics.

3.0 MANAGEMENT DIRECTION

3.1 GENERAL FISHERIES MANAGEMENT OBJECTIVE

The general goal of the Ministry of Natural Resources is to provide opportunities for outdoor recreation and resource development for the continuous social and economic benefits of the people of Ontario and to administer, protect and conserve public lands and waters.

The objectives of fisheries management in southern Ontario are to provide opportunities for recreational fishing and realize economic benefits derived from commercial and bait fisheries consistent with the maintenance of healthy fish communities.

These objectives summarize the general direction of fisheries management within the Owen Sound district.

From these overall goal statements general fisheries management objectives may be summarized as follows:

- to provide an optimum contribution of fish, fishing opportunities and associated benefits to meet such social needs as wholesome food, recreation, employment and income and a healthy human environment.

- to promote an aquatic environment conducive to sustain stable fish communities by protecting and maintaining fish habitat in both inland and Great Lakes waters.

- to protect indigenous fish communities in the inland and Great Lakes waters.

- to develop and maintain balanced fish communities based on stable self-sustaining stocks.

- to develop a greater knowledge of fish populations and fish habitat conditions and increase scientific knowledge of the fisheries resource base for more effective management purposes.

- to rehabilitate altered fish communities in inland and Great Lakes waters.

- to rehabilitate degraded fish habitat and water quality in inland and Great Lakes waters where feasible.

- to encourage conservation authorities and municipalities to establish policies which protect critical fisheries habitat.

- to develop a greater public understanding of fisheries, their values, stresses and management techniques.

From these broad management objectives a number of more specific objectives and targets have been developed for the local commercial, recreational and baitfish fisheries. These are consistent with the general objectives but reflect demands of the resource users and the capacity of local fisheries to meet that demand. In order to outline how objectives are to be achieved, long term management strategies and tactics have been formulated.

Selected strategies and tactics for the first five year (1986-90) period are presented in the Implementation Schedule (Appendix 3). It should be realized that the implementation of most strategies and tactics are dependent upon the allocation of sufficient manpower and funding.

Strategies and tactics for the recreational fishery have been listed according to coldwater, coolwater and warmwater fish community designations.

The fisheries management designation for individual lakes, streams and rivers is itemized in Appendix 1 and 2. Thus, depending upon the designation for a particular waterbody, the appropriate management strategies and tactics may be determined from those outlined.

As a result of computations derived for the background information document, a number of District Land Use Guideline targets have been refined to represent more realistic values.

3.2 SPORT FISHERIES MANAGEMENT OBJECTIVES

To meet the projected demand within the limits of a wisely managed and rehabilitated resource.

TARGETS

The recreational fishing target is to provide 1,046.150 angling opportunities by the year 2000. As a result of some data revisions this value represents a slight modification of the target of 1,089,535 angling opportunities presented in the background information document.

This target is based upon the resource capability and represents a more realistic value than projections derived from the provincial angler survey.

In terms of yield, the target is to provide a total potential sport fish yield of 382,690 kilograms annually by the year 2000.

Target yields may be detailed according to fish community type as follows:

(i) Coldwater - to provide a total potential yield of 130,350 kilograms annually by the year 2000.

(ii) Coolwater - to provide a total potential yield of 71,480 kilograms annually by the year 2000.

(iii) Warmwater - to provide a total potential yield of 125,720 kilograms annually by the year 2000.

(iv) Coarse/Baitfish Species - to increase the utilization of coarse fish species.

DISCUSSION

Coldwater fish species currently provide one of the most noteworthy recreational fisheries within the Owen Sound District.

Waters of Lake Huron, Georgian Bay and their respective tributaries will supply the bulk (93%) of projected coldwater fisheries angling opportunities.

Anadromous stocks of rainbow trout are perhaps the most highly sought species. Lake trout backcross and, more recently, chinook salmon also provide popular sport fisheries.

The projected demand for these coldwater fisheries must be achieved by increasing fish yields from Lake Huron and Georgian Bay.

It is anticipated that, as a result of current management efforts, the yield of coldwater fish species from Lake Huron and Georgian Bay will be increased by 25% by the year 2000.

Coolwater fisheries within the Owen Sound District are relatively limited.

While inland waters supply a portion of the demand, most angling opportunities are provided by the nearshore waters of Lake Huron, particularly in the Fishing Islands and Baie du Dore areas.

Coolwater fish yields are expected to increase only marginally over the planning period and, should demand increase substantially, anglers may be forced to utilize areas outside the District.

Warmwater fisheries currently provide the largest potential yields from Owen Sound district waters. Although there is little or no supportive data, it is suspected that these fisheries could supply more angling opportunities than they presently provide.

In order to increase fish yields to meet the projected demand, it is necessary to realize fish production from under-producing waters.

While management efforts will be directed toward improving highly sought recreational fisheries, it will also be necessary to encourage the use of under-utilized fish species.

In some other cases, such as Eugenia Lake, it may become necessary to alter the fish species which will be managed in order to reflect the changing physical and chemical status of an individual waterbody.

By increasing fish yields, realizing production from under-producing waters and directing angling opportunities to under-utilized species, it is anticipated that sport fish targets can be achieved. Further, it is also anticipated that Great Lakes waters will supply the bulk of these angling opportunities.

STRATEGIES

Fisheries management strategies have been refined from those outlined in the District Land Use Guidelines and represent long term direction to the year 2000.

The following strategies and the related tactics have been selected for each fish community as the means for achieving the sport fish targets:

(A) COLDWATER FISHERIES

(i) Protect the aquatic environment in those headwater areas supporting resident coldwater fisheries.

- identify sensitive areas through stream inventory and habitat assessment programs
- enforce existing legislation pertaining to fish habitat protection
- liaise with municipalities and other government agencies to ensure sensitive habitat receives recognition
- monitor water quality, pertaining to fish habitat, on a regular basis,
- minimize habitat degradation by regulating the timing of water related development activities
- educate private landowners of the importance of these areas and actively promote the protection of sensitive headwater areas.

(ii) Enhance existing fish populations.

- protect stocks during vulnerable i.e. spawning, periods through enforcement efforts and the designation of fish sanctuaries
- prevent or minimize interspecific competition by partitioning habitat and preventing the introduction of non native species
- manage the forage base by preventing overharvest
- protect heavily exploited stocks by redirecting fishing effort to under-utilized waters
- assist in sea lamprey control through the operation of sea lamprey barriers and collection of wounding data

- enforce existing fisheries regulations to prevent overharvest of local fish stocks
- prevent the introduction or spread of disease by planting only disease free stocks of fish
- selectively facilitate upstream access of migratory salmonids through spring and fall fishway operations.

(iii) Partition migratory from resident populations in spawning and/or nursery streams and rivers (see Appendix 2).

- utilize existing dams and obstructions as barriers where required
- construct weirs to selectively restrict fish migrations
- selectively restrict upstream access at fishways

(iv) Monitor exploitation rates of various species and fish stocks.

- conduct angler surveys
- implement creel census programs

(v) Control exploitation rates where overharvesting occurs.

- modify creel limits
- alter fishing seasons

(vi) Maintain gene pool integrity of existing populations.

- identify existing fish stocks by electrophoretic studies and tagging programs
- prevent the introduction, whether intentional or accidental, of other wild or domesticated stocks which would have a negative impact on native populations

(vii) Expand angling opportunities in the Great Lakes and inland waters where the fisheries resource can sustain additional angling pressure.

- maintain all year seasons and extended fall seasons where they presently exist
- consider revisions to existing regulations to provide fall fishing opportunities for rainbow trout and/or Pacific salmon in impoundments and other sections of rivers characterized as deep and slow moving. Some candidate waters include the Sydenham River (upstream from Mill Dam to Harrison Park) and the Sauble River (Sauble Falls to Parkhead).

- consider the introduction of additional/alternate fish species eg. Skamania rainbow trout, where feasible and where such an introduction would not have a serious impact on the existing desirable fish population

- continually review the need for existing fish sanctuaries eg. Willow Creek

- consider establishing "fly fishing only" and "no kill" zones on portions of selected streams and rivers as a means of providing a quality fishing experience

(viii) Encourage greater public access to inland and Great Lakes fisheries.

- purchase/develop more access points where access is a limiting factor or demand exists

- implement an extension program with private landowners and sportsmens' organizations to encourage fishing access

- support land easements with private landowners

- discourage individuals or municipalities from restricting public access except as required to maintain a predetermined level of fishing quality

(ix) Develop a comprehensive fisheries assessment program to monitor fish populations and habitat conditions as per the Implementation Schedule (Appendix 3).

- implement long term biological studies eg. juvenile rainbow trout assessment

- monitor fish habitat and water quality

- develop an index program to monitor the status of local fish populations

- initiate experimental fishing projects to monitor Great Lakes fish stocks

- carry out tagging studies on selected migratory salmonid stocks

- implement aquatic habitat inventory programs on unsurveyed waters

- evaluate survival and growth of planted fish by initiating stocking assessment programs

(x) Rehabilitate the oligotrophic component of Lake Huron and Georgian Bay with a native non-migratory top predator salmonid.

- continue plantings of lake trout backcross and/or lake trout in southwestern Georgian Bay

- expand plantings of lake trout and/or lake trout backcross in northwestern Georgian Bay

- regulate harvest of lake trout backcross and/or lake trout to ensure annual mortality does not exceed 40%

- monitor survival, growth and reproductive success of planted lake trout backcross and/or lake trout
- recognize Sea Lamprey Control objectives in all management programs
- control the introduction of undesirable exotic or non-indigenous fish species
- conduct paired plantings of lake trout and lake trout backcross to compare performance
- consider lake trout plantings if lake trout backcross program is unsuccessful

(xi) Supplement selected populations with plantings of disease free fish stocks according to provincial standards and guidelines.

- utilize adult fish transfers where feasible
- support upwelling incubation box and mini hatchery projects initiated under the Community Fisheries Involvement Program (CFIP).
- continue plantings of hatchery reared fish
- initiate disease testing of parent fish used in Community Fisheries Involvement Program (CFIP) fish culture projects
- examine the feasibility of expanding cage culture programs into Owen Sound District waters

(xii) Provide coldwater fishing opportunities by creating artificial "put and take" fisheries in selected waters as an interim measure to satisfy demand or divert pressure from resident stocks.

- purchase disease free fish from the private sector to plant in public waters
- encourage the private sector to provide artificial fisheries based on the user pays concept
- continue adult lake trout backcross (surplus adult brood stock) transfers from the Chatsworth Fish Hatchery to Robson Lakes to provide a winter fishery (as long as surplus fish are available)
- encourage the private industry to increase the production of fish species to address the demand for artificially maintained fisheries

(xiii) Encourage public participation in the management of local coldwater fisheries.

- maintain Lake Huron and Georgian Bay User Group Committees
- maintain contact with local sportsmens' clubs and interest groups

- establish involvement in the management of inland waters through a council comprised of different interest groups
- support projects initiated under the Community Fisheries Involvement Program (CFIP)

(xiv) Rehabilitate degraded fisheries habitat.

- initiate lake and stream rehabilitation programs to improve degraded fish habitat
- encourage and support habitat enhancement projects undertaken by sportsmen clubs and private interest groups
- prevent or discourage the construction of private dams and actively promote the removal of existing private dams

(B) COOLWATER AND WARMWATER FISHERIES

Selected management strategies and tactics for local coolwater and warmwater fisheries may be summarized as follows:

(i) Increase production from existing fisheries.

- manipulate and enhance habitat with regard to limiting factors i.e. artificial reefs, spawning shoal enhancement, artificial weeds, etc.
- manage the forage base by preventing overharvest
- prevent the introduction of diseases or competitive fish species by enforcing regulations pertaining to fish transfers and educating the public regarding unintentional introductions
- supplement degraded resident populations in under-producing waters with either adult transfers or plantings of hatchery reared fish

(ii) Prevent over-exploitation of local coolwater and warmwater fisheries.

- protect adult fish during spawning periods through the implementation of fish sanctuaries if necessary
- actively enforce existing creel limits and fishing seasons

(iii) Develop a comprehensive assessment program to monitor fish populations and associated habitat.

- monitor water quality on a regular basis
- undertake experimental fishing programs to monitor population status
- initiate aquatic habitat inventory programs on unsurveyed waters

- monitor demand and exploitation rates by creel census programs
- determine productivity rates and harvest potential in Lake Huron-Georgian Bay
- examine factors limiting fish production in under-producing waters

(iv) Minimize the impact of both private and municipal development projects on all inland waters and littoral areas of Lake Huron and Georgian Bay.

- liaise with municipalities and other government agencies
- educate private landowners of the impacts of various land uses on the aquatic environment
- utilize International Joint Commission (I.J.C.) guidelines for water related activities in the Great Lakes
- discourage/prohibit activities which alter or degrade fish habitat
- enforce existing fisheries regulations pertaining to the degradation of fisheries habitat i.e. Fisheries Act

(v) Increase angling opportunities for coolwater and warmwater fisheries.

- implement all year open seasons for northern pike in Georgian Bay
- eliminate the December 31-March 31 closure for smallmouth bass in both inland and Great Lakes waters
- introduce walleye, smallmouth bass or northern pike into under-producing waters not presently supporting a top predator species
- provide spring or fall angling opportunities in waters where migratory salmonids are absent

(vi) Encourage the utilization of coarse fish species.

- increase public awareness of under-utilized fish species through an active education and promotional program
- promote the harvest of carp by specific means other than by angling i.e. bow and arrow, in selected areas of Lake Huron - Georgian Bay
- permit the harvest of suckers by means other than angling during the winter closure in selected waters where migratory walleye or salmonids are absent

(vii) Assist local sportsmens' clubs, community organizations and interest groups to undertake projects designed to enhance fish habitat or local fish populations.

- improve communications through an active extension program
- encourage activities and provide expertise under the Community Fisheries Involvement Program (CFIP)

(viii) Protect warmwater/coolwater fisheries habitat

- identify critical areas of fish habitat through inventory and assessment programs
- enforce existing legislation pertaining to the degradation of fisheries habitat
- regulate timing of water related development activities

(ix) Rehabilitate degraded fisheries habitat

- support habitat enhancement projects initiated by interest groups by providing expertise and funding under the Community Fisheries Involvement Program (CFIP)
- implement projects to enhance degraded habitat

3.3 COMMERCIAL FISH MANAGEMENT OBJECTIVES

To maintain a viable industry by encouraging the harvest of commercial fish populations, under the quota management system, where it is biologically and economically feasible.

TARGET

To sustain an annual harvest of 921,225 kilograms of fish species from the Owen Sound District waters of Lake Huron and Georgian Bay by the year 2000. This target does not include coarse fish species for which a market currently does not exist.

DISCUSSION

With the exception of baitfish, commercial fishing activities are confined to the waters of Lake Huron and Georgian Bay.

The approach to commercial fisheries management is to establish long term targets based on sustainable yields realizing that there may be short term fluctuations in harvest arising from varying year class strengths of certain fish stocks.

Where a fish species is sought by both the commercial and recreational fisheries the allowable yield was partitioned with a portion allocated to each fishery (see Kerr, 1985a)

Under the quota management system, implemented in 1984, a total of 921,225 kilograms of fish was allotted to licenced commercial fishermen.

While commercial fishing quotas should serve to maximize harvests, ensure stable fish populations and maintain a viable industry, a number of issues must be addressed.

In order to be compatible with Ministry of Natural Resources rehabilitation efforts in some areas, it may be necessary to experiment with alternate forms of fishing gear eg. impounding gear.

Anglers and commercial fishermen must resolve their differences, agree to management efforts to partition the fisheries resource and embark in cooperative management of the fishery.

Commercial fishermen will also be encouraged to continue to work cooperatively with the Ministry of Natural Resources to manage local fish populations.

STRATEGIES

The commercial fishing target will be achieved utilizing the following management strategies and tactics:

(i) Maintain commercial fishing in Lake Huron and Georgian Bay to harvest the annual allowable yield of commercial fish stocks.

- assign individual quotas annually to regulate harvest
- encourage the industry to develop and implement fishing practices and techniques that would separate the harvest of target species from restricted species
- arbitrate angler-commercial fishing conflicts
- experiment with and, where feasible, utilize alternate eg. impounding, gear in areas where certain species are protected and/or where there are user conflicts
- expand public understanding of the commercial fishing industry, its role in society and its recognition as a valid user of the fisheries resource
- limit further entry into the commercial fishery to ensure continued viability of the industry and prevent over-exploitation of local fish stocks.

(ii) Maintain a stable fish community in the Owen Sound district waters of Lake Huron and Georgian Bay.

- study the interrelationships of different fish species and utilize the concept of fish community management
- prevent introductions of exotic fish species which would compete with or displace resident species
- protect the native forage base by limiting introductions of additional top predators and preventing the over-harvest of forage species
- eliminate the illegal commercialization ie. sale, of sport fish species through active enforcement efforts

- enforce commercial fishing related acts and regulations to ensure proper and accurate reporting, and make certain that quotas are not exceeded

- liaise with American jurisdictions of Lake Huron through special committees to maintain the balanced harvest of fish stocks and ensure that management strategies are compatible

- encourage commercial fishing organizations to participate in Community Fisheries Involvement Program (CFIP) projects such as habitat rehabilitation and fish culture

(iii) Rehabilitate degraded fish populations in the Owen Sound district waters of Lake Huron and Georgian Bay.

- regulate harvest of degraded stocks through individual quotas

- restore remnant or degraded populations using native or wild stocks

- establish self sustaining lake trout or lake trout backcross populations in Lake Huron and Georgian Bay by stocking yearling fish on or near documented spawning sites

- protect fish species such as lake trout, lake trout backcross and lake whitefish during their fall spawning period

(iv) Expand assessment programs to monitor the population status of different commercially harvested fish stocks.

- encourage commercial fishermen to allow on board catch sampling by Lake Huron Fisheries Assessment Unit (LHFAU) staff

- evaluate physical features of fisheries habitat in the Owen Sound District waters of Lake Huron and Georgian Bay by initiating habitat assessment programs

- establish experimental fishing programs in specific areas to monitor populations being established or those populations not fished commercially ie. burbot and alewife

- monitor exploitation rates and population status of different commercial fish species

(v) Recognize Sea Lamprey Control objectives in Lake Huron-Georgian Bay fisheries management programs.

- maintain and operate sea lamprey barriers i.e. Denny's Dam fishway

- collect and record information regarding wounding and scarring rates in conjunction with other fisheries management programs

- liaise with the Sea Lamprey Control Center to communicate information

(vi) Protect nearshore habitat essential to various fish species during different stages of their life history.

- regulate or prohibit shoreline development which alters or degrades fish habitat
- negotiate disposal of dredged materials in near shore waters
- utilize International Joint Commission (I.J.C.) guidelines to protect the aquatic environment
- prevent any type of pollution or contamination which would render fish unsuitable for human consumption

(vi) Encourage the commercial industry to seek markets for new and under-utilized species

- promote the harvest and sale of burbot and suckers
- support the commercial harvest of crayfish, where biologically and economically feasible, by licencing fishermen and promoting crayfish harvest

3.4 BAIT FISH MANAGEMENT OBJECTIVES

Manage local baitfish stocks to maintain a viable commercial industry consistent with stable baitfish populations.

TARGET

To provide 225,000 dozen baitfish by the year 2000. This value represents a proportion (50%) of the District Land Use Guideline (DLUG) target recognizing that, due to access limitations, the entire potential baitfish yield could not be utilized.

DISCUSSION

In 1984 the baitfish industry within the Owen Sound district consisted of 105 baitfish licences, a harvest of 56,378 dozen baitfish and reported sales of almost $46,000.

While these values probably represent gross under-estimates, it is estimated that both participation in the industry and baitfish harvest can be increased substantially in selected areas by the year 2000. Similarly, as the local sport fishery expands it is also anticipated that the demand for baitfish will also increase over that period of time.

STRATEGIES

The following strategies will be utilized to achieve the baitfish management targets and objective:

(i) Protect and maintain existing baitfish populations

- **prevent over-exploitation of baitfish populations by limiting entry and restricting harvest where necessary**
- **enforce existing regulations pertaining to the capture and sale of baitfish species**
- **monitor baitfish harvest through annual returns to ensure local populations in heavily utilized areas are not over-exploited**
- **prevent any baitfish species from becoming extinct by controlling exploitation**
- **prevent the introduction of competitive fish species or the spread of disease by enforcing pertinent regulations**
- **inform commercial baitfish dealers of all the requirements relating to the baitfish industry as set out in legislation**
- **develop a communications package to enlist the help of the public in advising the Ministry of Natural Resources of any violations that come to their attention**
- **develop a communications package to advise anglers of all legislation related to the harvest of bait fish for personal use**

(ii) Increase baitfish availability to anglers in the Owen Sound District.

- **expand baitfish harvest by redirecting baitfish operations to under-utilized waters**
- **introduce baitfish to waters not capable of supporting sport fish species ie. upper Bruce Peninsula**
- **encourage the private aquaculture industry to rear baitfish species to reduce pressure on wild populations and supplement the existing supply.**

(iii) Develop a comprehensive baitfish assessment program

- determine the productivity and allowable baitfish yields from local waters by implementing detailed population studies and initiating an index baitfish program
- identify critical areas of baitfish habitat through detailed habitat studies
- encourage baitfish dealers to submit accurate, detailed records of catches and sales

(iv) Minimize conflicts with the recreational fishery

- assign baitfish areas on a temporal and/or area basis
- exclude baitfish harvest from selected coldwater streams ie. Colpoys Creek, Upper Beatty Saugeen River.

3.5 NON CONSUMPTIVE RESOURCE USE MANAGEMENT OBJECTIVE

Actively promote non consumptive uses of the local fisheries resource.

TARGET

To provide an estimated 125,400 fish viewing opportunities annually by the year 2000.

This target was derived based on an estimate of current use and the projection that this type of non consumptive use is expected to increase by at least 20% over the planning period.

DISCUSSION

In addition to providing high quality recreational and commercial fisheries, Owen Sound District waters also supply many non consumptive uses.

Fish viewing and photographing is extremely popular especially during the spring and fall spawning periods.

The provincial fish hatchery at Chatsworth also provides guided tours of their facilities.

STRATEGIES

(1) Inform non consumptive users of existing fish viewing areas.

- issue news releases
- prepare information pamphlets

(ii) Develop fish viewing areas.

- install explanatory displays
- construct viewing platforms and/or walkways
- conduct guided tours of fishway facilities
- prevent projects or activities which interfere with fish viewing opportunities

3.6 MANAGEMENT ZONES

Fisheries management strategies and tactics have been detailed according to different fish communities.

These management prescriptions may be applied according to the designation of individual waters within the Owen Sound District (Maps 2 and 3).

Fisheries management designation may be considered under three general categories:

(i) Inland Lakes

Inland lakes are listed (Appendix 1) by the fish community(s) for which they shall be managed.

The management intent for all inland lakes shall be considered in conjunction with management strategies for adjoining waters. Species introductions in any inland lake will not be undertaken without a detailed assessment of the potential impact on other resident fisheries within the same watershed.

In most cases, inland lakes which presently support a combination of fish community types shall continue to be managed for these fisheries.

A number of small coldwater lakes and ponds will be managed to provide put-and-take trout fisheries in order to meet the demand for artificial fishing opportunities.

Walleye angling opportunities are limited in inland lakes within the Owen Sound District but walleye introductions will be considered if suitable unutilized habitat is available.

Under-producing lakes shall be investigated for the best possible use in order to be managed for fisheries production and recreational opportunities.

The introduction of sport fish species will be considered if the aquatic habitat is suitable to establish self sustaining populations.

The baitfish industry will be encouraged to expand in those inland lakes which are presently under-utilized.

Where fish production is not practical in under-producing waters other uses may be considered.

Most inland lakes are heavily developed in terms of cottages. Further development, in most cases, will be discouraged and any degradation of water quality or fisheries habitat will be prohibited.

(ii) Lake Huron-Georgian Bay

The Lake Huron-Georgian Bay waters within the Owen Sound District will be managed for all three fish community types in order to provide both recreational and commercial fisheries.

Native fishing will continue, under quota management, in the waters near the Cape Croker Indian Reserve.

Coldwater fisheries will continue to be the major thrust of management efforts in Georgian Bay.

Owen Sound and Colpoys Bay shall remain closed to commercial fishing and will be managed to provide coldwater angling opportunities for a number of species including rainbow trout, brown trout, lake trout backcross and chinook salmon.

Efforts shall continue to be directed toward establishing a self sustaining lake trout backcross population in southwestern and northwestern Georgian Bay.

In the Lake Huron basin, management efforts will be directed to maintaining the high quality sport fishery in the Fishing Islands, Southampton-Port Elgin and Baie du Dore areas.

Wild stocks of rainbow trout, brown trout and chinook salmon will be supplemented through plantings of fish reared under the Community Fisheries Involvement Program (CFIP).

Lake whitefish and chub stocks will be managed for the commercial fishery.

A long term study will be implemented to compare and assess the performance of lake trout and lake trout backcross in Owen Sound. Pending the success of the lake trout and/or lake trout backcross in Georgian Bay, a similar program may be implemented in the Lake Huron basin at some point in the future.

(iii) Streams and Rivers

Management of individual streams and rivers is based upon the resident fish community and, in many cases, partitioning portions of the river among different species, particularly migratory and stream resident salmonids (Appendix 2).

Based upon the fish community which will be managed, individual streams and rivers have been designated as coldwater, coolwater and warmwater. Coldwater fisheries have been subdivided to include migratory (rainbow trout, chinook salmon) and stream resident (brook trout, brown trout) salmonids.

It is important to realize that while the lower portion of many streams and rivers may support coolwater or warmwater fish communities, the waterway is utilized by migratory salmonids as a route to reach spawning and nursery areas further upstream.

Brook trout will receive special consideration in all management activities. Public and private stocking programs will be controlled to prevent the release of competitive fish species in brook trout waters.

Due to interspecfic competition between different salmonids, migratory and resident species will be separated in most streams. Both natural (waterfalls) and artificial (dams) structures may serve as barriers to partition a stream or river and separate migratory from resident populations.

In some instances, rainbow trout and/or Pacific salmon may be prohibited from certain waters where their presence is believed to conflict with other river resident salmonids. In some streams, weirs may have to be erected to control fish movements.

Efforts will be made to increase fish production from under-producing waters.

Stream habitat enhancement projects will be the major priority to realize fish production from these waters.

In an effort to increase the production of rainbow trout, access will be facilitated into under-utilized habitat in the Beaver River (to Kimberley) and Beatty Saugeen River (to Orchard Park).

The introduction of alternate fish species will be considered only if the new species can coexist with resident stocks.

Every effort will be undertaken to rehabilitate degraded fish stocks. Management tactics could include adult fish transfers, beaver dam removal, stream rehabilitation or the use of upwelling incubation boxes and mini hatchery facilities.

Water quality of various streams and rivers should be monitored on a routine basis and the maintenance of high water quality standards will be a major objective for all activities.

The headwater areas of coldwater streams will receive maximum protection, including the prevention of private fish hatchery construction, to maintain high water quality standards and ensure non desirable species or strains eg. escapees, are not introduced.

4.0 IMPLEMENTATION

4.1 GENERAL BACKGROUND

Consistent with the planning period established for all strategic land use planning exercises, this fisheries management plan provides the direction for fisheries management activities within the Owen Sound District to the year 2000.

Within that period all activities should be consistent with the strategies and tactics which have been selected to achieve the stated targets and objectives.

Strategies identified in this fisheries management plan will be implemented through:

(i) the preparation of five year implementation schedules;

(ii) programs and projects approved and funded under the Ministry of Natural Resources work planning process;

(iii) input or participation into other programs carried out by the Ministry of Natural Resources, fisheries assessment units or local conservation authorities;

(iv) cooperative efforts with local sportsmen's organizations and private interest groups under the Community Fisheries Involvement Program;

(v) review and approval of work plans and proposals from municipalities, private landowners and other government agencies.

This section of the fisheries management plan will establish the first five year (1986-90) implementation schedule.

Annual work plans will be developed from the priorities established in this implementation schedule. The annual work plan will address both the cost and timing for the implementation of tactics.

While this schedule may be updated annually, the implementation schedule for subsequent five year periods will be formally prepared in 1990 and 1995 respectively.

These schedules will be subject to public notice and review and must be approved by the District Manager and Regional Director.

Should any significant modifications or revisions to the implementation schedule or fisheries management plan be required, the same public review and approval process shall be followed.

4.2 IMPLEMENTATION SCHEDULE

The first five year (1986-90) fisheries management implementation schedule is detailed in Appendix 3 and illustrated in Maps 4 and 5.

Projects to be undertaken during the next five year period have been identified according to those which can be completed under existing funding, those which would require additional funding and those which would require a cooperative effort with other groups or agencies.

Many of these management activities initiated under current funding levels would be completed by permanent staff supplemented by seasonal employees and perhaps assistance from local sportsmen club members.

The priorization of different programs has been indicated because sequence is important and, in most cases, data is required by a specified date.

Routine planning and administrative functions have not been included. Similarly, enforcement activities are not detailed as they have been summarized in a separate enforcement plan for the Owen Sound district.

It should be realized however that many strategies and tactics, such as enforcing existing legislation or encouraging public participation, are carried out on an ongoing basis.

Numerous fisheries management projects, such as fish stocking and aquatic habitat rehabilitation, have been completed in recent years by local sportsmen's organizations under the Community Fisheries Involvement Program (CFIP). Since it is difficult to predict similar projects which will be initiated in the future, they have not been included in this schedule.

It should be recognized that all fisheries projects are subject to the requirements of the Environmental Assessment Act. As a result of complying with class assessment requirements there may be a change to the specific factors identified in this plan.

Generally, fisheries management programs over the next five year period will focus on assessment and rehabilitation.

Population assessment may involve a number of different operational programs including fishway operations, creel census, index netting and spawning studies.

The five year juvenile rainbow trout population assessment study shall conclude in 1987. It is hoped that a similar five year study can be initiated in 1988 on streams supporting resident populations of brook trout and brown trout.

Aquatic habitat assessment and rehabilitation will be carried out on a priorized basis (Harris, 1984). It is important to realize that aquatic habitat assessment is a prerequisite to rehabilitation.

Pending additional funding, a number of aquatic habitat inventory programs (lake and stream surveys) would be undertaken. These include numerous unsurveyed coldwater streams and a number of small, previously unsurveyed lakes and ponds.

In addition to monitoring done by the Ministry of the Environment, it is hoped that routine water quality analysis can be carried out at regular 1-2 year intervals on selected coldwater lakes and streams within the District.

The stocking program will be comprised of plantings for both rehabilitative and artificial purposes.

A number of small ponds shall continue to be planted to provide artificial (put and take) trout fisheries. Consistent with the species partitioning concept, some ponds will be switched to brook trout or brown trout instead of rainbow trout.

Recognizing the long term change in aquatic habitat, stocking efforts in Eugenia Lake will change from rainbow trout to smallmouth bass.

Maintenance plantings of lake trout and brook trout will be continued in Gillies Lake and Bell's Lake respectively. Adult lake trout backcross will continue to be planted, whenever available, in Robson Lakes in order to provide fishing opportunities.

The major rehabilitative stocking efforts shall continue to be lake trout backcross or lake trout in southwestern Georgian Bay and wild stocks of rainbow trout in the Saugeen River.

Stocking assessment shall be given a high priority but would require additional funding in order to implement comprehensive programs.

Projects which relate to specific management tactics that are not identified in the first (1986-90) implementation schedule will be identified and priorized in subsequent implementation schedules.

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GLOSSARY

ANGLING OPPORTUNITY

• A measure of supply to indicate the amount of use which a resource can sustain. An angling opportunity may be defined as one fishing trip not exceeding one day in length.

ARTIFICIAL FISHERY

• A fishery which is maintained entirely through plantings of hatchery reared fish in order to provide angling opportunities.

BAITFISH

• Any member of the minnow family Cyprinidae, except carp and goldfish; the mudminnow family Umbridae; the stickleback family Gasterosteidae; the trout-perch family Percopsidae; the sculpin family Cottidae; the genus Leucichthys of the whitefish family Coregonidae and the darter sub family Etheostomatinae.

COARSE FISH

• Fish species which are not normally sought by recreational anglers and are not marketed commercially. This commonly includes fish from the families Catostomidae (suckers), Ictaluridae (catfish), Gadidae (cods) and Sciaenidae (drums).

COLDWATER FISH COMMUNITY

• Fish populations comprised primarily of the families Salmonidae (trout and salmon), Gadidae (cods) and Clupeidae (herrings and whitefish).

COMMERCIAL FISH

• Commercial fish refers to those species captured from Lake Huron-Georgian Bay waters, under authority of a licence, and marketed for human consumption. The most common commercial fish species in the Owen Sound District are lake whitefish, chub, and yellow perch.

COOLWATER FISH COMMUNITY

• Fish populations comprised primarily of the families Esocidae (pike and muskellunge) and Percidae (perch and walleye).

CURRENT FISHERIES YIELD

• The current fisheries yield expresses the yield under existing circumstances given that, due to the presence of some under-producing waters, the total potential fisheries yield is currently not being realized.

EXOTIC FISH SPECIES

• A fish species which is neither native nor has become naturalized or self sustaining in waters within the province of Ontario.

FISH COMMUNITY

• A combination of different fish species living and interacting together in the same body of water.

INDIGENOUS FISH SPECIES

• The native fish species which originally inhabited a waterbody. For example, lake trout was one of the indigenous fish species of Lake Huron and Georgian Bay.

NATURALIZED FISH SPECIES

• A fish species which was not indigenous to a particular waterbody but was introduced and has become established through natural reproduction. Some examples in Lake Huron and Georgian Bay would include rainbow trout and brown trout.

OBJECTIVE

• A quantifiable and attainable end which is to be achieved.

PACIFIC SALMON

• Pacific salmon includes coho salmon, chinook salmon, kokanee salmon, pink salmon and any member of the genus Orchorhynchus.

POTENTIAL YIELD

• The theoretical maximum yield that can be taken annually without exhausting the compensatory reserve of a fish community. The term is analogous to maximum sustainable yield, maximum equilibrium yield and theoretical yield.

PROJECTED YIELD

• The projected yield represents the estimated fisheries yield at the year 2000 and is based upon changes in fish stocks as well as realizing a proportion of the potential yield from waters currently rated as under-producing.

REHABILITATION

• This term may be applied to both fish populations and fisheries habitat. In both instances rehabilitation denotes efforts to enhance or restore a degraded or stressed situation to its original condition.

SOUTHERN ONTARIO

• The southern Ontario planning region includes the following districts: Algonquin Park, Aylmer, Brockville, Cambridge, Carleton Place, Chatham, Cornwall, Huronia, Lindsay, Maple, Napanee, Niagara, Owen Sound, Parry Sound, Pembroke, Simcoe, Tweed and Wingham.

SPORT FISH

• Top predator fish species which are sought and may legally be taken by angling. In the Owen Sound District this usually includes fish from the families Salmonidae (trout and salmon), Percidae (walleye and perch), Esocidae (pike and muskellunge) and Centrarchidae (basses).

STOCK

• A species group or population of fish which maintains and sustains itself over time and may be identified by distinct genotypic or phenotypic characteristics.

STRATEGY

• Planned actions or measures designed to achieve a desired end.

TACTIC

• A specific method designed to achieve one or more strategies.

TARGET

• A quantified end to be achieved or completed by a specific date.

UNDER-PRODUCING WATERS

• Lakes and/or streams which, for some reason, have been withdrawn from fish production or are not producing at their estimated biological potential.

WARMWATER FISH COMMUNITY

• Fish populations comprised primarily of the family Centrarchidae (basses)

VIEWING OPPORTUNITY

• A measure of recreation supply utilized to describe the number of times a resource or a facility can be used in a given time period. A viewing opportunity is considered not to be greater than one day.

APPENDIX

APPENDIX 1: FISHERIES MANAGEMENT DESIGNATION FOR INLAND LAKES WITHIN THE OWEN SOUND DISTRICT.

WATERSHED	LAKE/POND	TOWNSHIP	RESIDENT FISH COMMUNITY	COMMENTS
2FA-1	Charles Lake	Keppel	Smallmouth Bass N. Pike Y. Perch	Management strategy to be determined after lake inventory.
	Gleason Lake	Keppel	Y. Perch	Management strategy to be determined after lake inventory.
	Scale Lake	Keppel	N. Pike Y. Perch	Management strategy to be determined after lake inventory.
	Slough of Despond*	Keppel	Unknown	Management strategy to be determined after lake inventory.
2FA-3	Barrow Bay	Eastnor	Smallmouth Bass N. Pike Y. Perch	Management strategy to be determined after lake inventory.
2FA-4	Gillies Lake	Lindsay	Lake Trout Lake Whitefish Smallmouth Bass	Lake trout population given priority but lake will be managed for coldwater and warmwater fish communities.
	Lymburner L.	Lindsay	Smallmouth Bass Y. Perch	Management strategy to be determined after lake inventory.
2FA-5	Barney Lake	St. Edmunds	Y. Perch	Management strategy to be determined after lake inventory.
	Cameron Lake	St. Edmunds	Smallmouth Bass Y. Perch Walleye	Smallmouth bass population given priority but lake will be managed for both coolwater and warmwater fish communities.
	Cyprus Lake	St. Edmunds	Smallmouth Bass Walleye Y. Perch N. Pike	Smallmouth bass population given priority but lake will be managed for both coolwater and warmwater fish communities.
	William Henry Marsh*	St. Edmunds	Unknown	Management strategy to be determined after lake inventory.
	Unnamed Lake#7	St. Edmunds	Unknown	Management strategy to be determined after lake inventory.
2FA-6	Crane Lake	St. Edmunds	Smallmouth Bass N. Pike Y. Perch	Lake will be managed for both coolwater and warmwater fish communities.
	Emmett Lake	St. Edmunds	Smallmouth Bass N. Pike Y. Perch	Lake will be managed for both coolwater and warmwater fish communities.

WATERSHED	LAKE/POND	TOWNSHIP	RESIDENT FISH COMMUNITY	COMMENTS
2FA-6 (Cont'd)	George Lake	St. Edmunds	Smallmouth Bass N. Pike Y. Perch	Lake will be managed for both coolwater and warmwater fish communities.
	Horseshoe Marsh	St. Edmunds	N. Pike	Management strategy to be determined after lake inventory.
	Lower Andrew Lake	St. Edmunds	Smallmouth Bass N. Pike Y. Perch	Lake will be managed for both coolwater and warmwater fish communities.
	Marley Lake*	St. Edmunds	Unknown	Management strategy to be determined after lake inventory.
	Moore Lake	St. Edmunds	N. Pike Y. Perch	Management strategy to be determined after lake inventory.
	Quenlin Lake*	St. Edmunds	Unknown	Management strategy to be determined after lake inventory.
	Shouldice L.	Lindsay	Smallmouth Bass Y. Perch	Smallmouth bass population given priority.
	Umbrella L.	St. Edmunds	N. Pike Y. Perch	Management strategy to be determined after lake inventory.
	Unnamed L.#16*	St. Edmunds	Unknown	Management strategy to be determined after lake inventory.
	Unnamed L.#23*	St. Edmunds	Unknown	Management strategy to be determined after lake inventory.
	Upper Andrew L.	St. Edmunds	N. Pike Y. Perch	Lake will be managed for resident coolwater fish community.
	Warder Lake	St. Edmunds	Smallmouth Bass Y. Perch	Smallmouth bass population given priority.
2FA-7	Ague Lake	Lindsay	Smallmouth Bass	Management strategy to be determined after lake inventory.
	Britain Lake	Lindsay	Smallmouth Bass Walleye(?) Y. Perch	Management strategy to be determined after lake inventory.
	Ira Lake	Lindsay	Smallmouth Bass N. Pike Y. Perch	Management strategy to be determined after lake inventory.
	Miller Lake	Lindsay	Smallmouth Bass N. Pike Y. Perch	Lake will be managed for both coolwater and warmwater fish communities.

WATERSHED	LAKE/POND	TOWNSHIP	RESIDENT FISH COMMUNITY	COMMENTS
2FA-8	Little Lake	Eastnor	Y. Perch	Lake should be evaluated for additional sport fish species.
	Otter Lake	Lindsay	Smallmouth Bass N. Pike Y. Perch	Lake will be managed for both coolwater and warmwater fish communities.
2FA-9	Chesley Lake	Amabel	Smallmouth Bass Walleye N. Pike Y. Perch	Walleye given priority but lake will be managed for both coolwater and warmwater fish communities.
	Gould Lake	Amabel	Largemouth Bass Walleye N. Pike Y. Perch	Walleye given priority but lake will be managed for both coolwater and warmwater fish communities.
2FA-10	Arran Lake	Arran	Largemouth Bass N. Pike Y. Perch	Largemouth bass given priority but lake will be managed for both coolwater and warmwater fish communities.
	Francis Lake	Keppel	Smallmouth Bass N. Pike Y. Perch	Smallmouth bass given priority but lake will be managed for both coolwater and and warmwater fish communities.
	Maryville Lake	Amabel	Largemouth Bass N. Pike Y. Perch	Largemouth bass given priority but lake will be managed for both coolwater and warmwater fish communities.
	Mud Lake	Albemarle	N. Pike Y. Perch Largemouth Bass	Largemouth bass given priority but lake will be managed for both coolwater and and warmwater fish communities.
	Mountain (Hepworth) Lake	Keppel	Smallmouth Bass Largemouth Bass N. Pike Y. Perch	Lake will be managed for both coolwater and warmwater fish communities.
	Shallow Lake	Keppel	N. Pike Y. Perch Smallmouth Bass	Lake will be managed for both coolwater and warmwater fish communities.
	Sheppard L.	Keppel	Y. Perch	Lake should be evaluated for additional sports fish species.
	Townline L.	Keppel	Smallmouth Bass N. Pike Y. Perch	Smallmouth bass given priority but lake will be managed for both coolwater and and warmwater fish communities.
	Unnamed L.#2*	Arran	Unknown	Management strategy to be determined after lake inventory.
2FA-11	Berford Lake	Albemarle	Smallmouth Bass N. Pike Y. Perch	Smallmouth bass given priority but lake will be managed for both coolwater and warmwater fish communities.

WATERSHED	LAKE/POND	TOWNSHIP	RESIDENT FISH COMMUNITY	COMMENTS
2FA-11 (Cont'd.)	Big Mud Lake	Albemarle	N. Pike Y. Perch	Lake will be managed for resident coolwater fishery.
	Boat Lake	Amabel	Walleye N. Pike Y. Perch Largemouth Bass	Walleye given priority but lake will be managed for both coolwater and warmwater fish communities.
	Hodgins Lake*	Albemarle	Unknown	Management strategy to be determined after lake inventory.
	Isaac Lake	Albemarle	Smallmouth Bass N. Pike Y. Perch Walleye	Management strategy to be determined after updated lake inventory.
	North Hodgins L.*	Albemarle	Unknown	Management strategy to be determined after lake inventory.
	Patterson Lake	Amabel	Y. Perch	Lake should be evaluated for additional sport fish species.
	Sky Lake	Albemarle	Walleye Largemouth Bass N. Pike Y. Perch	Walleye given priority but lake will be managed for both coolwater and warmwater fish communities.
	Spry Lake	Albemarle	Smallmouth Bass N. Pike Y. Perch	Lake will be managed for both coolwater and warmwater fish communities.
	Unnamed L.#3*	Albemarle	Unknown	Management strategy to be determined after lake inventory.
	Unnamed L.#4*	Amabel	Unknown	Management strategy to be determined after lake inventory.
2FA-12	Beattie Lake	Albemarle	Smallmouth Bass N. Pike Y. Perch	Smallmouth given priority but lake will be managed for both coolwater and warmwater fish communities.
2FA-14	Upper and Lower Silver Lakes*	Amabel	Unknown	Management strategy to be determined after lake inventory.
2FB-1	Bass Lake	Keppel	Smallmouth Bass Y. Perch	Smallmouth bass given priority in management activities.
	Gowan Lake	Keppel	Y. Perch	Lake should be evaluated for additional sport fish species.
	Mary Lake	Keppel	Smallmouth Bass Y. Perch	Smallmouth bass given priority in management activities.

WATERSHED	LAKE/POND	TOWNSHIP	RESIDENT FISH COMMUNITY	COMMENTS
2FB-3	Williams Lake	Holland	Smallmouth Bass Y. Perch	Lake will be managed for smallmouth bass but private sector may be allowed to to purchase and plant brook trout to provide an artificial fishery.
2FB-5	Mountain Lake (Meaford Tank Range)	St. Vincent	Walleye Smallmouth Bass	Walleye given priority but lake will be managed for both coolwater and warmwater fish communities with the cooperation of federal government.
2FB-7	Eugenia Lake	Artemesia	Largemouth Bass Smallmouth Bass Y. Perch	Trout stocking will be phased out and lake will be managed as a warmwater fishery.
	Feversham Pond	Osprey	Brook Trout	Managed as an artificial brook trout fishery.
	Flesherton Pond	Artemesia	Brook Trout	Managed as an artificial brook trout fishery.
	Wilcox Lake	Artemesia	Smallmouth Bass Y. Perch	Lake will be managed for smallmouth bass but private sector may be allowed to to purchase and plant brook trout to provide an artificial fishery.
2FC-1	Allan Park Pond	Bentinck	Rainbow Trout	Pond can be managed privately to supply an artificial rainbow trout fishery.
	Durham Town Pond	Glenelg	Brook and/or Brown Trout	Pond may be managed privately to supply an artificial brook/brown trout fishery.
	Marl Lake	Brant	Smallmouth Bass Largemouth Bass N. Pike Y. Perch	Warmwater fishery given priority but lake will be managed for both coolwater and warmwater fish communities.
	Wilder Lake	Egremont	Smallmouth Bass	Lake will be managed for smallmouth bass but private sector may be allowed to purchase and plant brook trout to provide an artificial fishery.
2FC-2	Harrison Lake	Sullivan	N. Pike	-
	McCullough L.	Sullivan	Smallmouth Bass Y. Perch	Smallmouth bass given priority in management activities.
	Negro Lake	Holland	Largemouth Bass N. Pike	Largemouth bass given priority but lake will be managed for both coolwater and warmwater fish communities.
	Robson Lakes Lake "A" (Connel's L.)	Holland	Bluegill Baitfish	Lake to be evaluated for additional sport fish species.

WATERSHED	LAKE/POND	TOWNSHIP	RESIDENT FISH COMMUNITY	COMMENTS
2FC-2 (Cont'd)	Lake "B"* (Hine's L.)	Holland	N. Pike Smallmouth Bass Y. Perch	Manage resident fish communities but continue to stock adult lake trout backcross to provide artificial coldwater fishery.
	Lake "C" (Clarke's L.)	Holland	N. Pike Smallmouth Bass Y. Perch	Manage resident fish communities but continue to stock adult lake trout backcross to provide artificial coldwater fishery.
	Lake "D" (Mud lake)*	Holland	Baitfish	Lake should be evaluated for potential to support sport fish species.
	Scone Pond*	Sullivan	Unknown	Management strategy to be determined after lake inventory.
	Unnamed Lake #2*	Sullivan	Smallmouth Bass Y. Perch N. Pike	Smallmouth bass given priority but lake will be managed for both coolwater and warmwater fish communities.
	Williamsford Pond	Holland	Brook/Brown Trout	Lake may be managed privately to supply artificial brook/brown trout fishery.
2FC-3	Mount Forest Town Pond	Egremont	Brook and/or Brown Trout	Lake may be managed privately to supply artificial brook/brown trout fishery.
	Ayton Mill Pond*	Normanby	Brook and/or Brown Trout	Lake may be managed privately to supply artificial brook/brown trout fishery.
2FC-6	Bester Lake*	Greenock	Unknown	Management strategy to be determined after lake inventory.
	Cunningham Lake	Greenock	N. Pike Y. Perch	Management strategy to be determined after lake inventory.
	Schmidt Lake	Greenock	N. Pike Y. Perch	Management strategy to be determined after lake inventory.
	Unnamed L.#1*	Greenock	N. Pike	Management strategy to be determined after lake inventory.
2FC-8	Dankert Lake	Brant	Largemouth Bass Y. Perch	Management strategy to be determined after lake inventory.
2FC-9	Copp's Lake	Bentinck	N. Pike Y. Perch	Lake should be evaluated for additional sport fish species.
	Louise Lake	Bentinck	Brook Trout	Lake may be planted privately to provide artificial brook trout fishery.
	McDonald Lake*	Bentinck	Unknown	Management strategy to be determined after lake inventory.

WATERSHED	LAKE/POND	TOWNSHIP	RESIDENT FISH COMMUNITY	COMMENTS
2FC-9 (Cont'd)	Townsend Lake	Glenelg	Smallmouth Bass Y. Perch	Management strategy to be determined after lake inventory.
2FC-10	Bell's Lake	Glenelg	Brook Trout Y. Perch	Only native brook trout lake remaining in the district. Yellow Perch and other spiny rayed fishes will be discouraged.
	Farden Lake*	Glenelg	Unknown	Management strategy to be determined after lake inventory.
	Irish Lake	Artemesia	Smallmouth Bass Y. Perch	Resident warmwater fishery will be managed. Lake may be planted to provide artificial rainbow trout fishery.
	Markdale Town Ponds	Glenelg	Brook/Brown Trout	Ponds may be planted privately to provide artificial brook or brown trout fishery.
	McCormick Lake	Bentinck	Y. Perch	Lake to be evaluated for additional sport fish species.
	McLean Lake*	Bentinck	Unknown	Management strategy to be determined after lake inventory.
	Walker Lake*	Holland	Unknown	Management strategy to be determined after lake inventory.
2FC 11	Holstein Pond	Egremont	Brook Trout	Lake may be stocked privately to provide artificial brook trout fishery.

*Waters producing below potential

APPENDIX 2: FISHERIES MANAGEMENT DESIGNATION AND SPECIES PARTITIONING IN STREAMS AND RIVERS WITHIN THE OWEN SOUND DISTRICT.

WATERSHED	STREAM NAME	FISH COMMUNITY DESIGNATION	FISH SPECIES INVOLVED	PARTITIONING	COMMENTS
2ED-10	Pretty River (upper section)	Coolwater	Rainbow Trout Brook Trout	Escarpment @ Roy Rob	Consider construction of a weir @ some point near Grey-Simcoe County line to separate resident and migratory species.
	Silver Creek (upper section)	Coldwater	Brook Trout Rainbow Trout	Maintain barrier @ Castle Glen Estates to separate brook trout and rainbow trout	-
2ED-11	Mad River (Upper section)	Coldwater	Brook Trout Baitfish	Maintain existing private dams to separate rainbow trout and brook trout	
	Priddles Creek	Coldwater	Brook Trout	Maintain existing private dams to separate rainbow trout and brook trout	
2FA-1	Gleason (Oxenden) Creek	Coldwater	Pacific Salmon Rainbow Trout	Georgian Bay to Escarpment (Waterfalls)	Stream rehabilitation required to increase increase nursery habitat
			Brook Trout	Upstream of Escarpment (Waterfalls)	Rehabilitation required for brook trout
	Colpoys Creek	Coldwater	Rainbow Trout	Georgian Bay to Escarpment (Waterfalls)	-
			Brook Trout and Rainbow Trout	Upstream of Escarpment	Some habitat rehabilitation required
	Unnamed (Hallard) Creek	Coldwater	Rainbow Trout	N/A	Some habitat rehabilitation required
2FA-2	Run off to Hope Bay	-	-	N/A	-

WATERSHED	STREAM NAME	FISH COMMUNITY DESIGNATION	FISH SPECIES INVOLVED	PARTITIONING	COMMENTS
2FA-3	Judges Creek	Coldwater	Brook Trout	Upstream of Southern crossing of Hwy. 6	Municipal drain rehabilitation required
		Coldwater	Brown Trout	Between Southern and Northern crossing of Hwy. 6	Municipal drain rehabilitation required
		Under-producing	Rainbow Trout	Inlet of Barrow Bay	Rehabilitation required from Hwy. 6 to Barrow Bay
2FA-4	Run off to Dyer Bay	-	-	-	-
2FA-5	William Henry Marsh Runoff	Coolwater/ Warmwater	N. Pike Smallmouth Bass	N/A	-
2FA-6	Crane River	Transitional (Coldwater)	Brook Trout Brown Trout	N/A	Rehabilitate resident trout populations
	Dorcas Bay Creek	Coldwater	Brook Trout	N/A	Investigate, protect and rehabilitate if required
	Other small Unnamed Creeks	Coldwater	Brook Trout	N/A	Investigate, protect and rehabilitate if required
	Sideroad Creek	Coolwater	N. Pike	N/A	Investigate for fisheries management potential
	Willow Creek	Coldwater	Brook Trout Brown Trout	Maintain beaver dam(s) near mouth to restrict rainbow trout and chinook salmon access upstream	Beaver dam removal required (upstream)
2FA-7	Sadler Creek	Under-producing	N/A	N/A	Investigate for fisheries management potential
	Spring Creek	Coldwater	Brook Trout	Maintain Beaver dams to partition brook trout from rainbow trout	Rehabilitation efforts required
	Unnamed Creeks	Coolwater	N. Pike	N/A	-
2FA-8	Black Creek	Coolwater/ Warmwater	N. Pike Largemouth Bass	N/A N/A	- -
	Chin Creek	Warmwater	Smallmouth Bass	N/A	-
	Old Woman River	Coolwater	N. Pike Y. Perch	N/A N/A	- -

WATERSHED	STREAM NAME	FISH COMMUNITY DESIGNATION	FISH SPECIES INVOLVED	PARTITIONING	COMMENTS
2FA-8 (Cont'd)	Stokes Creek	Coolwater/ Warmwater	N. Pike Smallmouth Bass	N/A	Manage stream to protect water quality in Stokes Bay
2FA-9	Pringle Creek	Under-producing	N/A	N/A	Investigate for management potential and/or rehabilitation
2FA-10	Sauble River	Transitional and Coldwater	Chinook Salmon Rainbow Trout Smallmouth Bass N. Pike		Construct fish passes @ Allenford, Parkhead and Tara for migratory salmonids. particularly chinook salmon
	Arkwright Creek	Coldwater	Brook Trout	N/A	Those areas containing brook trout should be protected ie. construct a weir, and rehabilitated
	Cashore Creek	Coldwater	Brook Trout	N/A	Those areas containing brook trout should be protected ie construct a weir, and rehabilitated
	Davidson Creek	Coldwater	Brook Trout	N/A	Those areas containing brook trout should be protected ie construct a weir, and rehabilitated
	Desboro Creek	Coldwater	Brook Trout	N/A	Those areas containing brook trout should be protected ie. construct a weir, and rehabilitated
	Grimston Creek	Coldwater	Brook Trout	N/A	Those areas containing brook trout should be protected ie. construct a weir, and rehabilitated
	Spring Creek	Coldwater	Brown Trout Rainbow Trout Chinook Salmon	Private Dam (if required)	Stream (and dam) is largely private and potential management strategies must be derived in consultation with owners
	Keady Creek	Coldwater	Brook Trout	N/A	Those areas containing brook trout should be protected ie. construct a weir, and rehabilitated
	Tara Creek	Coldwater	Brook Trout	N/A	Those areas containing brook trout should be protected ie. construct a weir, and rehabilitated

WATERSHED	STREAM NAME	FISH COMMUNITY DESIGNATION	FISH SPECIES INVOLVED	PARTITIONING	COMMENTS
2FA-10 (Cont'd)	Albemarle Creek	Coldwater	Brown Trout	N/A	-
	Clavering Creek	Warmwater	N. Pike Smallmouth Bass	North of Conc.22	-
		Coldwater	Brook Trout Smallmouth Bass	South of Conc.22	Brook trout rehabilitation required
	Givens Creek	Coldwater	Brook Trout	N/A	-
	Hepworth Creek	Coolwater/ Warmwater	N.Pike Smallmouth Bass	N/A N/A	- -
	Rankin River	Warmwater/ Coolwater	Chinook Salmon Smallmouth Bass N. Pike Walleye	N/A	Walleye given priority but all fish communities will be actively managed
2FA-12	Sucker Creek	Coldwater	Brown Trout	N/A	Requires habitat rehabilitation
	Kirklands Creek	Under-producing	N/A	N/A	Investigate for management potential
	Maryville Creek	Under-producing	N/A	N/A	Investigate for management potential
2FA-13	Nil	N/A	N/A	N/A	-
2FA-14	Nil	N/A	N/A	N/A	-
2FA-15	Nil	N/A	N/A	N/A	-
2FB-1	Indian River	Coldwater	Chinook Salmon Rainbow Trout	Up to Escarpment (Indian Falls)	Some habitat rehabilitation required
			Brown Trout	Above Escarpment	Habitat rehabilitation required. Investigate for brown trout potential
2FB-2	Maxwell Creek	Coldwater	Chinook Salmon Rainbow Trout	Up to Escarpment	-
		Coldwater	Brook Trout	Above Escarpment	Habitat rehabilitation required
	Pottawatomi River	Coldwater	Chinook Salmon Rainbow Trout	Up to Escarpment (Jones Falls)	Habitat rehabilitation required
		Coldwater	Brook Trout Brown Trout	Above Escarpment	Habitat rehabilitation required

WATERSHED	STREAM NAME	FISH COMMUNITY DESIGNATION	FISH SPECIES INVOLVED	PARTITIONING	COMMENTS
2FB-3	Armstrong Creek	Coldwater	Brook Trout	Above Inglis Falls Road	Restrict access of migratory salmonids
	Heath Creek	Coldwater	Brown Trout Rainbow Trout	Up to Escarpment (Waterfalls)	-
		Coldwater	Brown Trout Brook Trout	Above Escarpment	-
	Sydenham River	Coldwater	Rainbow Trout Brown Trout Chinook Salmon	Up to Escarpment (Inglis Falls)	- -
		Coldwater	Brown Trout Brook Trout	Above Escarpment	-
2FB-4	Keefers Creek	Under-producing (Coldwater)	Rainbow Trout Chinook Salmon	Up to Escarpment (Waterfalls)	Requires some habitat rehabilitation
			Brown Trout	Above Escarpment	Manage water sources to improve water quality downstream and investigate potential for brown trout introduction
	Telfer (Bothwell's) Creek	Coldwater	Chinook Salmon Rainbow Trout Brook Trout	-	Management priorities given to rainbow trout and brook trout
2FB-5	Johnson Creek	Under-producing (Coldwater)	Rainbow Trout	N/A	Investigate potential for for habitat rehabilitation
	Orchard Creek	Under-producing (Coldwater)	Brook Trout	N/A	Habitat rehabilitation required
	Sucker Creek	Warmwater	Unknown	N/A	Investigate for other resource uses ie. waterfowl production
	Unnamed Creek (at Sunnyside Beach)	Coldwater	Brook Trout	N/A	Habitat rehabilitation required
	Waterton Creek	Under-producing (Coldwater)	Brook Trout	N/A	Investigate for potential rehabilitation

WATERSHED	STREAM NAME	FISH COMMUNITY DESIGNATION	FISH SPECIES INVOLVED	PARTITIONING	COMMENTS
2FB-6	Bighead River	Coldwater (Trans-itional)	Brown Trout Rainbow Trout Chinook Salmon	Upstream to Private Dam at at Massie	Smallmouth Bass also exist in lower reaches of river
		Coldwater	Brook Trout Brown Trout	Above Massie Dam	Migratory salmonid access restricted @ Massie Dam
	Minniehill Creek	Coldwater	Rainbow Trout Chinook Salmon	Up to existing barriers (man made or natural)	-
			Brook Trout Brown Trout	Above existing barriers	-
	Rocklyn Creek	Coldwater	Rainbow Trout Chinook Salmon Brook Trout Brown Trout	-	Construct a weir at mouth to restrict access to migratory salmonids in the fall
	Walters Creek	Coldwater	Rainbow Trout Chinook Salmon	Up to existing barriers (man made or natural)	Use Bognor dam (Walters Creek) to restrict access of Pacific Salmon in the fall
			Brook Trout Brown Trout	Above existing barriers	-
	Unnamed tributaries	Coldwater	Rainbow Trout Chinook Salmon	Up to existing barriers (man made or natural)	-
			Brook Trout Brown Trout	Above existing barriers	-
	Meaford and East Meaford Creeks	Under-producing (Coldwater)	Rainbow Trout Chinook Salmon	-	Rehabilitate for water management purposes
2FB-7	Beaver River	Coldwater	Rainbow Trout Chinook Salmon	Kimberley (spring)	Need to construct a removable weir @ Kimberley
				Clendennan Dam (fall)	Restrict access of migratory salmonids above Clendennan dam in the fall
			Brown Trout	Above Kimberley (spring) and Clendennan Dam (fall)	
	Beaver River and other streams flowing into Eugenia Lake	Coldwater	Brook Trout Brown Trout	Partitioned by Eugenia Lake & Eugenia Falls	-

WATERSHED	STREAM NAME	FISH COMMUNITY DESIGNATION	FISH SPECIES INVOLVED	PARTITIONING	COMMENTS
2FB-7	Boyne River and Tributaries	Coldwater	Brook Trout	Above Hoggs Falls	-
	Mitchell/ Kolapore Creek	Coldwater	Rainbow Trout	Up to Escarpment (Rockhaven Falls)	-
		Coldwater	Brook Trout Brown Trout	Above Escarpment	-
	Wodehouse Creek	Coldwater	Rainbow Trout	Upstream to Escarpment	Habitat rehabilitation required
			Brook Trout Brown Trout	Above Escarpment	Examine feasibility to manage for brook/brown trout
	Tributaries flowing into Main River from West	Coldwater	Brook Trout Brown Trout	Escarpment	Manage to maintain water quality and brook/brown trout populations if they exist
2FB-8	Indian Brook	Coldwater	Rainbow Trout	Up to Escarpment	Habitat rehabilitation required to stabilize flows and reduce summer temperatures
		Coldwater	Brook Trout	Above Escarpment	Habitat rehabilitation required to stabilize flows and reduce summer temperatures
2FC-1	Palmer Brook	Coldwater	Brook Trout	N/A	Consider weir construction to restrict rainbow trout
	Stoney Creek	Coldwater	Rainbow Trout Brook Trout	N/A	Indian Reserve lands. Habitat rehabilitation required
A. SAUGEEN RIVER (LAKE HURON TO WALKERTON)					
	Main Saugeen River	Coolwater/ Warmwater (Transition)	Smallmouth Bass N. Pike Muskellunge Rainbow Trout Chinook Salmon Brown Trout	Lake Huron to Walkerton Dam	All migratory salmonids will continue to be permitted above Denny's Dam. Any fish pass constructed at Walkerton will be operated in such a way that Pacific Salmon will not pass upstream during the fall. Sea lamprey control measures will continue @ Denny's Dam.

WATERSHED	STREAM NAME	FISH COMMUNITY DESIGNATION	FISH SPECIES INVOLVED	PARTITIONING	COMMENTS
2FC-1	Horseshoe Creek	Coldwater	Brook Trout	N/A	Requires investigation to determine management potential
	Sangs Creek	Coldwater	Rainbow Trout	N/A	-
	Silver Creek	Warmwater	Unknown	N/A	Investigate to determine management potential
	Tolton's Creek	Coldwater	Brook Trout	N/A	Requires investigation to determine management potential
	Vesta Creek	Under-producing (Coldwater)	Brook Trout	N/A	Investigate feasibility of rehabilitation
All other tributaries of the Main Saugeen River to Walkerton - if brook trout exist, these populations should be protected and the streams should be investigated for future fisheries management potential.					
B. WALKERTON TO HANOVER					
	Main Saugeen River	Transitional (Coolwater/ Warmwater)	Rainbow Trout Brown Trout N. Pike Smallmouth Bass	Utilize Hanover dam to partition migratory from resident salmonids	Install fish passes at Walkerton and Maple Hill Dams for rainbow trout access only
	Habermehl Creek	Coldwater	Brook Trout Brown Trout	-	Exclude migratory rainbow trout and rehabilitate resident brook and brown trout populations
	Otter Creek	Coldwater	Rainbow Trout Brown Trout	To Dam on County Road 9	Manage brown trout above dam @ City Road 9
	Ruhl Creek	Warmwater	Smallmouth Bass	-	N/A
All other tributaries on the Main Saugeen River to Hanover should be managed for rainbow trout if no residual populations of brook trout or brown trout exist.					
C. UPSTREAM OF HANOVER					
	Main Saugeen River	Trans-itional (Coldwater)	Brook Trout Brown Trout Smallmouth Bass	Upstream of Hanover	Restrict rainbow trout access above Hanover Dam
	Brown Creek	Coldwater	Brook Trout	N/A	-

WATERSHED	STREAM NAME	FISH COMMUNITY DESIGNATION	FISH SPECIES INVOLVED	PARTITIONING	COMMENTS
2FC-1 (Cont'd)	Camp Creek	Coldwater	Brown Trout Brook Trout	N/A	-
	Durham Creek	Coldwater	Brook Trout Brown Trout	N/A	-
	Little Spring Creek	Coldwater	Brook Trout	N/A	-
	McMillan Creek	Coldwater	Brook Trout	N/A	-
	Varney Creek	Under-producing (Coldwater)	Brook Trout	N/A	Consider dam removal
	All other small tributaries	Coldwater	Brook Trout	N/A	-
2FC-2	North Saugeen River	Warmwater	Smallmouth Bass	Upstream to Scone Dam	Investigate for fisheries management potential
		Trans-itional (Coldwater/ Warmwater)	Smallmouth Bass Brown Trout N.Pike	Scone to Mooresburg	Brown trout will be given management priority
		Coldwater	Brook Trout Brown Trout	Above Mooresburg	-
	Cotter Creek	Coldwater	Brook Trout	N/A	-
	Christie Creek	Coldwater	Brook Trout	N/A	-
	Middleton Creek	Coldwater	Brook Trout	N/A	-
	Negro Creek	Coldwater	Brook Trout	N/A	-
	North Middleton Creek	Coldwater	Brook Trout	N/A	-
	Quarrie Creek	Coldwater	Brook Trout	N/A	-
	Sutcliffe Creek	Coldwater	Brook Trout	N/A	-
2FC-3	Main South Saugeen River	Warmwater (Under-producing)	Smallmouth Bass	To Mount Forest	-
		Coldwater (Under-producing)	Smallmouth Bass Brook Trout Brown Trout	Above Mount Forest	Consider long term rehabilitation program

WATERSHED	STREAM NAME	FISH COMMUNITY DESIGNATION	FISH SPECIES INVOLVED	PARTITIONING	COMMENTS
2FC-3 (Cont'd)	Cameron Creek	Under-producing (Coldwater)	Brook Trout	N/A	Rehabilitation for brook trout required
	Cemetary Creek	Under-producing (Coldwater)	Brook Trout	N/A	Rehabilitation for brook trout required
	Fairbanks Creek	Under-producing (Coldwater)	Brook Trout	N/A	Rehabilitation for brook trout required
	Letterbreen Creek	Under-producing (Coldwater)	Brook Trout	N/A	Rehabilitation for brook trout required
	Woodland Spring Creek	Coldwater	Brook Trout	N/A	Rehabilitation for brook trout required
	Unnamed Creeks (Egremont Township)	Under-producing (Coldwater)	Brook Trout	N/A	Rehabilitation for brook trout required
2FC-4	Edits Creek	Coldwater(?)	Unknown	N/A	Investigate for fisheries management potential
	Mill Creek	Warmwater	Smallmouth Bass	N/A	Investigate for fisheries management potential
2FC-5	Curries Creek	Coldwater	Brook Trout	N/A	-
	Willow Creek	Warmwater	Brook Trout N. Pike	N/A	Manage brook trout as they exist on site to site basis
	Allan Creek	Under-producing (Coldwater)	Brook Trout	N/A	Should be investigated to determine fisheries management and/or rehabilitation potential
	Fritz Creek	Under-producing	Unknown	N/A	Should be investigated to determine fisheries management and/or rehabilitation potential
	Formosa Creek	Coldwater	Brook Trout	N/A	Should be investigated to determine fisheries management and/or rehabilitation potential
	Greenock Creek	Warmwater	Smallmouth Bass	Up to Greenock Dam	Should be investigated to determine fisheries management and/or rehabilitation potential
		Coldwater	Brook Trout	Above Greenock dam	

WATERSHED	STREAM NAME	FISH COMMUNITY DESIGNATION	FISH SPECIES INVOLVED	PARTITIONING	COMMENTS
2FC-5 (Cont'd)	Plum Creek	Under-producing (Coolwater)	N. Pike	N/A	Should be investigated to determine fisheries management and/or rehabilitation potential
	Schmidt Creek	Under-producing (Coolwater)	N. Pike	N/A	Should be investigated to determine fisheries management and/or rehabilitation potential
	Teeswater River	Under-producing (Coolwater/ Warmwater)	N. Pike Smallmouth Bass	N/A	Should be investigated to determine fisheries management and/or rehabilitation potential
Note: Where brook trout exist in these streams, populations should be protected and managed.					
2FC-7	Burgoyne Creek	Under-producing (Coolwater/ Warmwater)	Smallmouth Bass	N/A	Consider habitat rehabilitation
	Snake Creek	Under-producing (Coolwater/ Warmwater)	N. Pike Smallmouth Bass	N/A	Consider habitat rehabilitation
2FC-8	Brant Creek	Coldwater	Brook Trout	N/A	Intensive management required for brook trout
	Deer Creek	Under-producing (Coldwater)	Brook Trout Smallmouth Bass	N/A	Brook trout to be managed in pockets as they occur
	Pearl Creek	Under-producing (Coldwater)	Brook Trout	N/A	Intensive management required for brook trout
2FC-9	Mountain Creek	Under-producing (Coldwater)	Brown Trout	N/A	Rehabilitation (dam removal) required to lower mid-summer temperatures
	Spring Creek	Coldwater	Brook Trout		-
	Styx River	Coldwater	Brook Trout Brown Trout	N/A	-
2FC-10	Barhead Creek	Coldwater	Brook Trout	N/A	No brown trout or rainbow trout introductions should be allowed

WATERSHED	STREAM NAME	FISH COMMUNITY DESIGNATION	FISH SPECIES INVOLVED	PARTITIONING	COMMENTS
2FC-10 (Cont'd)	Black Creek	Coldwater	Brook Trout	N/A	No brown trout introductions should be allowed
	Blind Creek	Coldwater	Brook Trout	N/A	No brown trout introductions should be allowed
	Markdale Creek	Coldwater	Brook Trout	N/A	No brown trout introductions should be allowed
	McKechnie Creek	Coldwater	Brook Trout	N/A	No brown trout introductions should be allowed
	Traverston Creek	Coldwater	Brook Trout	N/A	No brown trout introductions should be allowed
2FC-11	Main Beatty Saugeen River	Coldwater	Brown Trout Rainbow Trout Brook Trout	To Hwy. 6 (Orchard Park)	Utilize this section of river for rainbow trout production as well as brook and brown trout
		Coldwater	Brook Trout Brown Trout	Above Hwy. 6	No rainbow trout access permitted above Hwy. 6
	Johnson Creek	Coldwater	Brook Trout Brown Trout	N/A	Rehabilitation required
	McGillvary Creek	Coldwater	Brook Trout	N/A	Rehabilitation required
	Skunk Creek	Coldwater	Brook Trout Brown Trout Rainbow Trout	N/A	Rehabilitation required
	Yeovil Creek	Coldwater	Brook Trout Brown Trout	N/A	Rehabilitation required
	All small tributaries	Coldwater	Rainbow trout Brook Trout Brown Trout	N/A	No rainbow trout permitted above any private dams
2FC-12	Carrick Creek	Coldwater	Brook Trout	N/A	-
	Meux Creek	Coldwater	Brook Trout	N/A	-
	Unnamed (Harrington) Creek	Coldwater	Brook Trout	N/A	-
2FD-1	Andrews Creek	Under-producing (Coldwater)	Rainbow Trout	N/A	Habitat rehabilitation required

WATERSHED	STREAM NAME	FISH COMMUNITY DESIGNATION	FISH SPECIES INVOLVED	PARTITIONING	COMMENTS
2FD-1 (Cont'd)	Inverhuron Creek	Warmwater	Smallmouth Bass	N/A	Habitat rehabilitation required
	Little Sauble River	Under-producing (Coldwater)	Rainbow Trout Brook Trout Brown Trout	N/A	Habitat rehabilitation required
	Lorne Creek	Under-producing (Coldwater)	Rainbow Trout	N/A	Habitat rehabilitation required
	McGregor Point Creek	Warmwater	Smallmouth Bass	N/A	N/A
	Tiverton Creek	Under-producing (Coldwater)	Rainbow Trout	N/A	Habitat rehabilitation required
	Underwood Creek	Under-producing (Coldwater/ Coolwater)	Rainbow Trout Chinook Salmon N.Pike	N/A	Habitat rehabilitation required
2FD-2	Kincardine Creek	Under-producing (Coldwater)	Brook Trout Rainbow Trout Smallmouth Bass	N/A	Extremely poor quality due to physiographic features. Requires major habitat restoration. Protect lower fishery for bass as well as runs of migratory salmonids
	Penetangore River	Under-producing (Coldwater)	Brook Trout Rainbow Trout Smallmouth Bass Chinook Salmon	N/A	Extremely poor quality due to physiographic features. Requires major habitat restoration. Protect lower fishery for bass as well as runs of migratory salmonids. Upper portion of river should be investigated for fisheries management potential.

APPENDIX 3: FISHERIES MANAGEMENT IMPLEMENTATION SCHEDULE, 1986-1990, OWEN SOUND DISTRICT.

MANAGEMENT ACTIVITY		RELATED MANAGEMENT STRATEGIES	PRIORIZED LISTING OF SITES/WATERBODIES
(A)	**PROGRAMS WHICH CAN BE CARRIED OUT AT EXISTING FUNDING LEVELS**		
(i)	SPRING AND FALL FISHWAY OPERATIONS (SWIM THROUGH)	- Enhance Existing Fish Populations - Partition Migratory From Resident Populations in Spawning and/or Nursery Streams and Rivers (See Appendix 2)	- Mill Dam Fishway (Every Year) - Denny's Dam Fishway (Every Year) - Thornbury Fishlock (Every Year) - Clendennan Fishway (Every year) - Haines Dam Fishway (Every Year) - Bognor Fishway (Every Year) - Walkerton Fishway (Every Year When Constructed)
(ii)	FISH STOCKING	- Rehabilitate the oligotrophic component of Lake Huron and Georgian Bay with a native non migratory top predator salmonid - Supplement selected coldwater populations with plantings of disease free fish stocks according to provincial standards and guidelines - Provide coldwater fishing opportunities by creating artificial "put and take" fisheries in selected waters - Increase production from existing coolwater/warmwater fisheries	- Georgian Bay (Lake Trout Backcross @ 8 Sites) - Owen Sound (Lake Trout @ 4 Sites) - Saugeen River (Rainbow Trout) - Gillies Lake (Lake Trout) - Bell's Lake (Brook Trout) - Eugenia Lake (Rainbow Trout in 1986 changing to Smallmouth Bass in 1987) - Allan Park Pond (Rainbow Trout) - Flesherton Pond (Brook Trout) - Durham Pond (Brook Trout) - Holstein Pond (Brook Trout) - Irish Lake (Rainbow Trout) - Wilder Lake (Rainbow Trout in 1986 changing to Smallmouth Bass in 1987) - Williams Lake (Rainbow Trout in 1986 changing to Smallmouth Bass in 1987) - Wilcox Lake (Rainbow Trout in 1986 changing to Smallmouth Bass in 1987)
(iii)	FISH STOCKING ASSESSMENT	- Develop a comprehensive fisheries assessment program to monitor fish populations and habitat conditions - Assist local sportsmen's clubs, community organizations and interest groups to undertake projects designed to enhance fish habitat or local fish populations	- Mill Dam Fishway on Sydenham River (Fall operations 1986 - 1988 to assess fall lake run brown trout)
(iv)	JUVENILE SALMONID POPULATION ASSESSMENT PROGRAM	- Develop a comprehensive coldwater fisheries assessment program to monitor fish populations and habitat conditions	- Beatty Saugeen River (Rainbow Trout assessment 1986-87; Brook/Brown Trout assessment 1988-90) - Colpoys Creek (Rainbow Trout assessment 1986-87)

MANAGEMENT ACTIVITY	RELATED MANAGEMENT STRATEGIES	PRIORIZED LISTING OF SITES/WATERBODIES
JUVENILE SALMONID POPULATION ASSESSMENT PROGRAM (CONT'D)	- Assist local sportsmen's clubs, community organizations and interest groups to undertake projects designed to enhance fish habitat or local fish populations	- Sydenham River (Rainbow Trout assessment 1986-87; Brook/Brown trout assessment 1988-90) - Beaver River (Rainbow Trout assessment 1986-87; Brook/Brown trout assessment 1988-90) - Pottawatomi River (Rainbow Trout assessment 1986-87) - Gleason (Oxenden) Creek (Rainbow Trout assessment 1986-87) - Little Sauble River (Rainbow Trout assessment 1986-87) - Mitchell Creek (Rainbow Trout assessment 1986-87) - Telfer (Bothwell's) Creek (Rainbow Trout assessment 1986-87) - Rocklyn Creek (Rainbow Trout assessment 1986-87) - Walters Creek (Rainbow Trout assessment 1986-87) - Minniehill Creek (Rainbow Trout assessment 1986-87) - Indian River (Rainbow Trout assessment 1986-87) - Maxwell Creek (Rainbow Trout assessment 1986-87) - Indian Brook (Rainbow Trout assessment 1986-87) - Keefers' Creek (Rainbow Trout assessment 1986-87) - Woodland Spring Creek (Brook/ Brown trout assessment 1988-90) - Willow Creek (Brook/Brown Trout assessment 1988-90) - Camp Creek (Brook/Brown Trout assessment 1988-90) - Pretty River (Brook/Brown Trout assessment 1988-90) - Rocky Saugeen River (Brook/ Brown Trout assessment 1988-90) - Bighead River (Brook/Brown Trout assessment 1988-90) - Boyne River (Brook/Brown Trout assessment 1988-90) - Hamilton Creek (Brook/Brown Trout assessment, 1988-90) - Styx River (Brook/Brown Trout assessment 1988-90) - Spey River (Brook/Brown Trout assessment 1988-90)

MANAGEMENT ACTIVITY		RELATED MANAGEMENT STRATEGIES	PRIORIZED LISTING OF SITES/WATERBODIES
(v)	SPAWNING STUDIES	- Develop a comprehensive assessment program to monitor fish populations and habitat conditions	- Assorted Lake Huron - Georgian Bay Tributaries (each year during the spring and fall)
(B)	**PROGRAMS WHICH COULD BE CARRIED OUT IN CONJUNCTION WITH THE LAKE HURON FISHERIES ASSESSMENT UNIT**		
(i)	INDEX NETTING (GEORGIAN BAY)	- Expand assessment programs to monitor the status of different commercially harvested fish stocks -Develop a comprehensive fisheries assessment program to monitor fish populations and habitat conditions - Rehabilitate the oligotrophic component of Lake Huron and Georgian Bay with a native non-migratory top predator salmonid - Maintain a stable fish community in the Owen Sound District waters of Lake Huron and Georgian Bay	- Owen Sound Bay - Cape Rich - Vail Point
(ii)	SPAWNING STUDIES	- Rehabilitate the oligotrophic component of Lake Huron and Georgian Bay with a native non migratory top predator salmonid	- Georgian Bay (Thornbury to to Lion's Head) during the fall of each year.
(iii)	CREEL CENSUS	- Monitor exploitation rates of various fish species and fish stocks - Rehabilitate the oligotrophic component of Lake Huron and Georgian Bay with a native non migratory top predator salmonid	- Owen Sound and Colpoys Bays (Winter of 1986)
(C)	**PROGRAMS WHICH COULD BE CARRIED OUT IN COOPERATION WITH LOCAL SPORTSMEN'S CLUBS AND/OR VOLUNTEERS**		
(i)	CREEL CENSUS	- Monitor exploitation rates of various species and fish stocks	- Gillies Lake (Each winter 1986-90) - Chesley Lake (Winter 1986)

MANAGEMENT ACTIVITY		RELATED MANAGEMENT STRATEGIES	PRIORIZED LISTING OF SITES/WATERBODIES
(D)	PROGRAMS WHICH COULD BE UNDERTAKEN WITH ADDITIONAL FUNDING		
(i)	FISH CONTAMINANT MONITORING	- Protect nearshore habitat essential to various fish species during different stages of their life history	- Lake Huron (Southampton to Port Port Elgin), 1986 - Sauble River (1987) - Sydenham River (1988) - Hope Bay (1989) - Lake Huron (near Douglas Point), 1990
(ii)	STREAM REHABILITATION	- Protect the aquatic environment in those headwater areas supporting resident coldwater fisheries - Rehabilitate degraded fisheries habitat	- Pottawatomi River (above Jones Falls) - Willow Creek - Woodland Spring Creek - Fairbanks Creek - Sang's Creek
(iii)	LAKE REHABILITATION	- Rehabilitate degraded fisheries habitat	- Gillies Lake - Miller Lake - Bell's Lake - Red Bay Area (Lake Huron) - Howdenvale Area (Lake Huron) - Oliphant Area (Lake Huron)
(iv)	FISH STOCKING ASSESSMENT	- Develop a comprehensive fisheries assessment program to monitor fish populations and habitat conditions - Recognize Sea Lamprey Control objectives in Lake Huron - Georgian Bay fisheries management programs	- Saugeen River (rainbow trout assessment during spring and fall operations of Denny's Dam fishway, 1986-1990) - Allan Park Pond (one year assessment of artificial fishery) - Louise Lake (one year assessment of artificial fishery) - Holstein Pond (one year assessment of artificial fishery)
(v)	WATER QUALITY MONITORING (ANNUALLY)	- Protect the aquatic environment in those headwater areas supporting resident coldwater fisheries - Develop a comprehensive fisheries assessment program to monitor fish populations and habitat conditions	- Bell's Lake - Gillies L. (Lindsay) - Robson Lakes - Beaver River - Bighead River - Colpoys Creek - Sauble River - Saugeen River - Sydenham River - Willow Creek
(vi)	STREAM HABITAT ASSESSMENT	- Protect the aquatic environment in those headwater areas supporting resident coldwater fisheries	- Beatty Saugeen River (upstream of Hwy.6) - Keefer's Creek - Little Sauble River - Mitchell Creek - Judges Creek - Pottawatomi River

MANAGEMENT ACTIVITY		RELATED MANAGEMENT STRATEGIES	PRIORIZED LISTING OF SITES/WATERBODIES
	STREAM HABITAT ASSESSMENT (CONT'D)		- Sauble River - Woodland Spring Creek - Indian Brook - Minniehill Creek - South Saugeen River - Willow Creek - Indian River - Rocklyn Creek - Rocky Saugeen River - Spey River - Camp Creek - Hamilton Creek - Telfer (Bothwell's) Creek - Sydenham River (above Inglis Falls)
(vii)	SPAWNING STUDIES	- Develop a comprehensive fisheries assessment program to monitor fish populations and habitat conditions	- Bell's Lake (Fall) - Gillies Lake (Fall) - Fishing Islands (Summer and Fall) - Chesley Lake (Spring) - Miller Lake (Spring and Summer) - Eugenia Lake (Summer)
(viii)	STREAM INVENTORY	- Protect the aquatic environment in those headwater areas supporting resident coldwater fisheries - Develop a comprehensive fisheries assessment program to monitor fish populations and habitat conditions - Protect warmwater/coolwater fisheries habitat	- Barhead Creek - Blind Creek - Cemetary Creek - Congers Creek - Little Beaver R. - Maxwell Creek - North Spey River - Spring Creek - Woodland Spring Creek - Yeovil Creek - Brown's Creek - Cameron Creek - Givens Creek - Grier Creek - Johnston's Creek - Maryville Creek - North Penetangore River - Stoney Creek - Sutcliffe Creek - Tiverton Creek - Bill's Creek - Cashore Creek - Davidson Creek - Desboro Creek - Dorcas Bay Creek - Horseshoe Creek - Kincardine Creek - Kirkland's Creek - Skunk Creek

MANAGEMENT ACTIVITY		RELATED MANAGEMENT STRATEGIES	PRIORIZED LISTING OF SITES/WATERBODIES
	STREAM/ INVENTORY (CONT'D)		- Quarrie Creek - East Meaford Creek - Flynn's Creek - Foy's Creek - Mud Creek - Orchard Creek - Priddle's Creek - Sunnyside Beach Creek - Thom's Creek - Tolton's Creek - Varney Creek - Blantyre Creek - Brant Creek - Currie's Creek - Little Spring Creek - Markdale Creek - MacMillan Creek - McGilvary Creek - Meaford Creek - Middleton Creek - Silver Creek
(1x)	LAKE INVENTORY	- Increase angling opportunities for coolwater and warmwater fisheries - Provide coldwater fishing opportunities by creating artificial "put and take" fisheries in selected waters - Protect warmwater/coolwater fisheries habitat - Increase baitfish availability to anglers from Owen Sound District waters	- Allan Park Pond - Boyd Lake - Feversham Town Pond - George Lake - Markdale Town Ponds - Mount Forest Town Pond - Scale Lake - Schmidt Lake - South Hodgins L. - Williamsford Pond - Beattie Lake - Britain Lake - Charles Lake - Francis Lake - Gleason Lake - Ira Lake - Lymburner Lake - McGill Lake - Quenlin Lake - Townline Lake - Barney Lake - Barrow Bay - Berford Lake - Boat Lake - Emmett Lake - Isaac Lake - Mary Lake - Maryville Lake - Mountain Lake (Keppel) - Sky Lake

	MANAGEMENT ACTIVITY	RELATED MANAGEMENT STRATEGIES	PRIORIZED LISTING OF SITES/WATERBODIES
	LAKE INVENTORY (CONT'D)		- Ague Lake - Big Mud Lake - Brewster Lake - Conley Lake - Dankert Lake - Farden Lake - McLean Lake - Meyer Lake - Moore Lake - Patterson Lake - Bartley Lake - Cunningham Lake - Gillies L.(Artemesia) - Little Mud Lake - McCormick Lake - North Hodgins Lake - Sheppard Lake - Townsend Lake - Turner Lake - Umbrella Lake
(X)	CREEL CENSUS	- Monitor exploitation rates of various species and fish stocks - Develop a comprehensive assessment program to monitor fish populations and associated habitat	- Meaford Harbour (Winter) - Thornbury Harbour (Winter) - Beaver River-Thornbury Harbour (Spring and Fall) - Fishing Islands (Summer) - Bighead River - Meaford Harbour (Spring and Fall) - Bell's Lake (Summer and Winter) - Saugeen River - Southampton area (Spring and Fall) - Robson Lakes (Winter) - Bafe du Dore (Summer and Fall)
(xi)	INDEX NETTING PROGRAMS	- Develop a comprehensive fisheries assessment program to monitor fish populations and habitat conditions - Maintain gene pool integrity of existing populations - Supplement selected populations with plantings of disease free fish stocks according to provincial standards and guidelines	- Bell's Lake - Chesley Lake - Mountain Lake (Meaford Tank Range) - Arran Lake - Miller Lake - Cameron - Cyprus Lakes - Eugenia Lake

MAP I: FISHERIES BACKGROUND INFORMATION, OWEN SOUND DISTRICT

GEORGIAN BAY

NOTTAWASAGA

LEGEND

- D— Dam
- W— Waterfall
- ▲ Fishway
- ■ Private Hatchery
- ⬢ Stocked Lake / Stream
- ✚ Indian Reserve
- ▨ Native Fishing Area
- ▧ Areas Restricted to Commercial Fishing*
- ★ Commercial Fishing Area
- ⬬ Chatsworth Fish Culture Station
- ▩ Concentration Area of Commercial Operators Serving Anglers

* Bruce County 1/2 Mile Limit Closure Not Included

HURON

NOTTAWASAGA BAY

AMABEL

KEPPEL

SYDENHAM

ST. VINCENT

DERBY

ARRAN

SAUBLE

SULLIVAN

HOLLAND

EUPHRASIA

COLLINGWOOD

ELDERSLIE

BRUCE

KINCARDINE

GREENOCK

BRANT

BENTINCK

GLENELG

ARTEMESIA

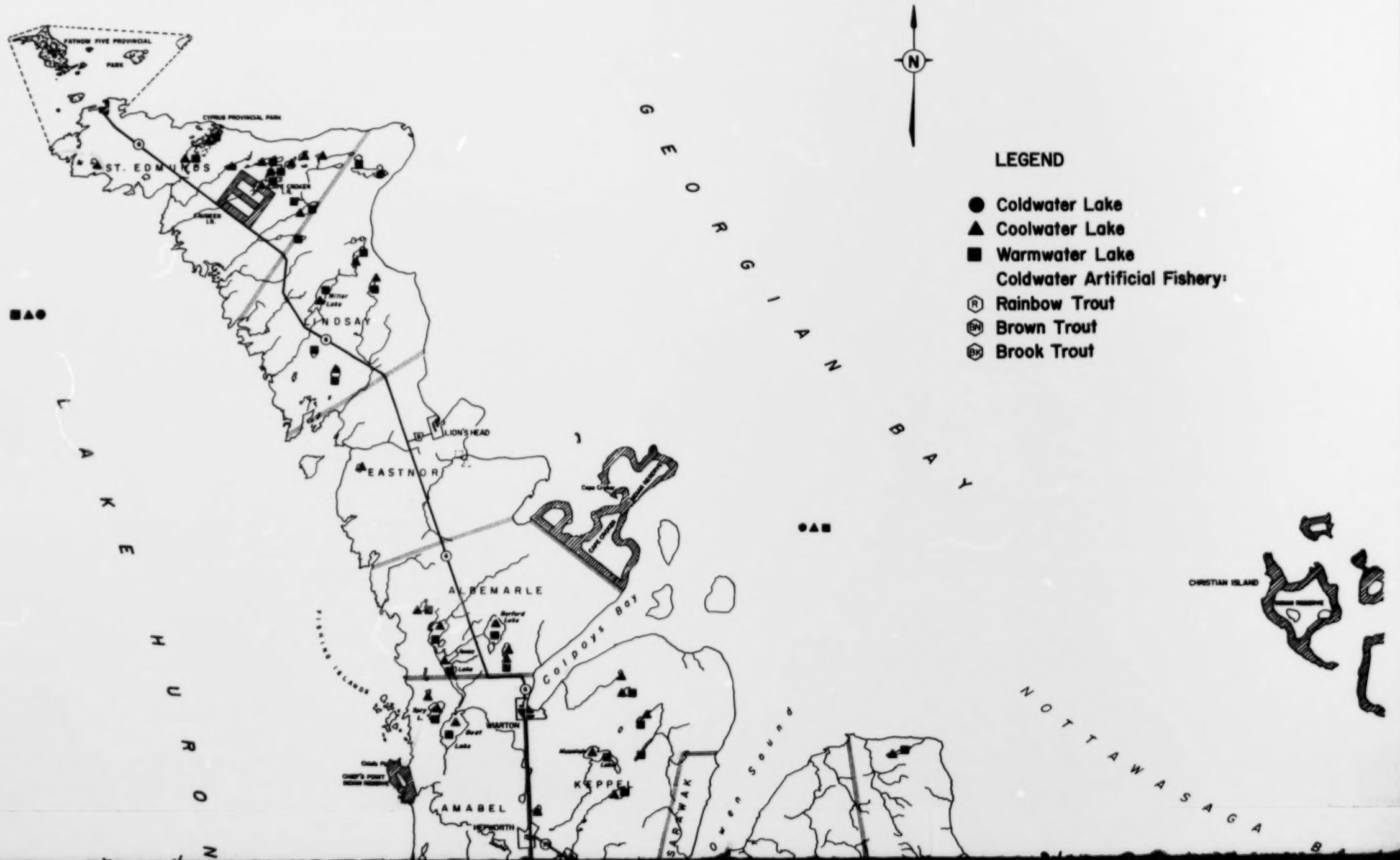
OSPREY

NORMANBY

EGREMONT

PROTON

MAP 2: FISHERIES MANAGEMENT DESIGNATION FOR INLAND LAKES AND GREAT LAKES, OWEN SOUND DISTRICT



HURON

NOTTAWASAGA BAY

WARTON

CHIEF'S POINT INDIAN RESERVE

AMABEL

KEPPEL

HEPWORTH

SHALLOW LAKE

SABAWAK

OWEN SOUND

SYDENHAM

MEAFORD

ST. VINCENT

THORNBURY

CRAIGLEITH PROVINCIAL PARK

SAUGEEN INDIAN RESERVE

DERBY

TARA

SOUTHAMPTON

ARRAN

PORT ELGIN

CHATSWORTH

COLLINGWOOD

EUPHRASIA

MacGREGOR POINT PROVINCIAL PARK

SAUGEEN

SULLIVAN

HOLLAND

ELDERSLIE

MARKDALE

ARTEMESIA

OSPREY

BRUCE

PAISLEY

CHESLEY

FLESHERTON

SPRUCE RIVER PROVINCIAL PARK

TIVERTON

BENTINCK

GLENELG

KINCARDINE

KINCARDINE

BRANT

GREENOCK

DURHAM

DUNDALK

HANOVER

WALKERTON

PROTON

NEUSTADT

NORMANBY

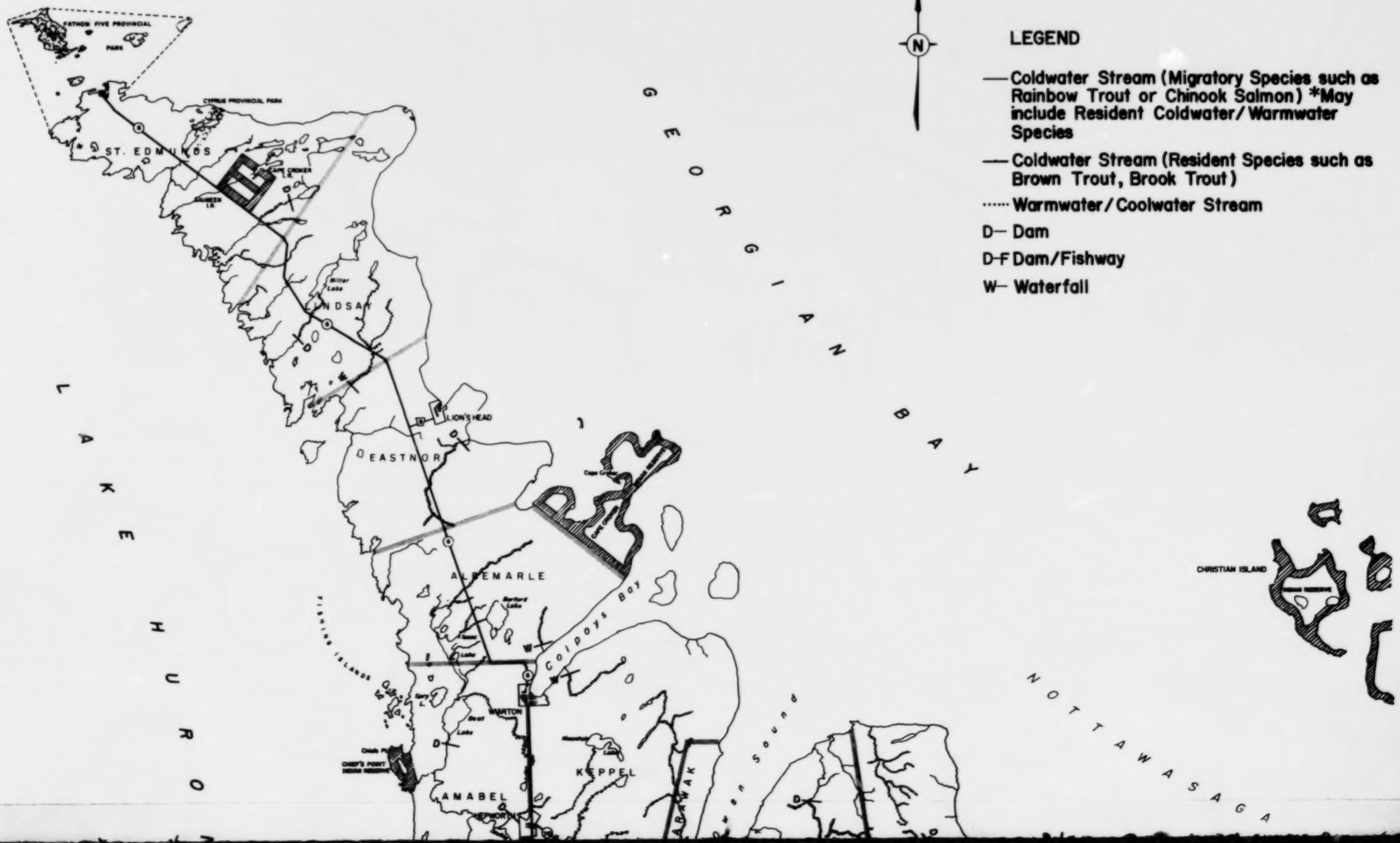
EGREMONT

SCALE 1:350,000

MILES

KILOMETRES

MAP 3: FISHERIES MANAGEMENT DESIGNATION FOR STREAMS AND RIVERS, OWEN SOUND DISTRICT

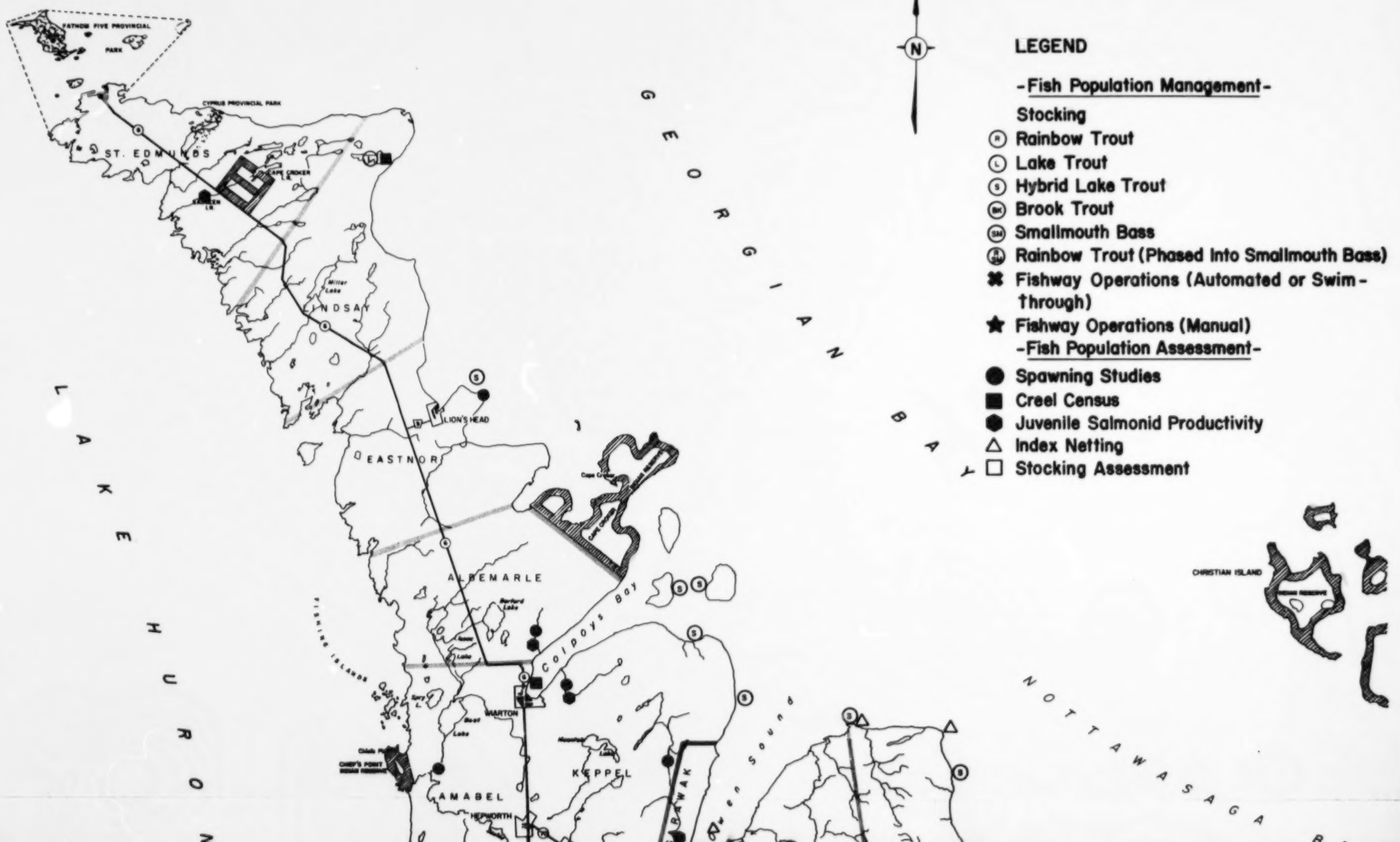


LEGEND

- —— Coldwater Stream (Migratory Species such as Rainbow Trout or Chinook Salmon) *May include Resident Coldwater/Warmwater Species
- —— Coldwater Stream (Resident Species such as Brown Trout, Brook Trout)
- ····· Warmwater/Coolwater Stream
- D— Dam
- D-F Dam/Fishway
- W— Waterfall

HURON
NOTTAWASAGA BAY
Owen Sound
SABAWAK
WARTON
CHIEF'S POINT INDIAN RESERVE
AMABEL
KEPPEL
SHALLOW LAKE
SYDENHAM
OWEN SOUND
MEAFORD
ST. VINCENT
THORNBURY
CRAIGLEITH PROVINCIAL PARK
DERBY
TARA
SOUTHAMPTON
ARRAN
PORT ELGIN
COLLINGWOOD
EUPHRASIA
CHATSWORTH
MacGREGOR POINT PROVINCIAL PARK
SAUGEEN
SULLIVAN
HOLLAND
ELDERSLIE
BRUCE
PAISLEY
CHESLEY
MARKDALE
ARTEMESIA
OSPREY
INVERHURON PROVINCIAL PARK
TIVERTON
FLESHERTON
GLENELG
BENTINCK
KINCARDINE
BRANT
GREENOCK
DUNDALK
DURHAM
HANOVER
WALKERTON
NEUSTADT
NORMANBY
EGREMONT
PROTON
SCALE 1:250,000
MILES
KILOMETRES

MAP 4: FISHERIES MANAGEMENT IMPLEMENTATION SCHEDULE, 1986-90 (BASED ON EXISTING FUNDING)



HURON

NOTTAWASAGA BAY

Nine Mile River

Sydenham River

Saugeen River

Sauble River

Teeswater River

Pine River

Beaver River

Boyne River

Black Ash Creek

Bighead River

Silver Creek

Mill Creek

Boat Lake

Sarty Lake

Meaford Lake

Cheeseley Lake

Arran Lake

Bell Lake

Bluewater Provincial Park

Inverhuron Provincial Park

MacGregor Point Provincial Park

Craigleith Provincial Park

Chief's Point Indian Reserve

Saugeen Indian Reserve

WARTON

AMABEL

KEPPEL

HEPWORTH

SHALLOW LAKE

SARAWAK

OWEN SOUND

SYDENHAM

MEAFORD

ST. VINCENT

THORNBURY

CRAIGLEITH

SOUTHAMPTON

TARA

DERBY

ARRAN

PORT ELGIN

SAUGEEN

SULLIVAN

CHATSWORTH

HOLLAND

EUPHRASIA

COLLINGWOOD

ELDERSLIE

PAISLEY

CHESLEY

BRUCE

INVERHURON

TIVERTON

KINCARDINE

GREENOCK

BRANT

ARTEMESIA

MARKDALE

OSPREY

FLESHERTON

GLENELG

BENTINCK

DURHAM

DUNDALK

HANOVER

WALKERTON

NEUSTADT

NORMANBY

EGREMONT

PROTON

SCALE 1:250,000

MILES

KILOMETRES

MAP 5: FISHERIES MANAGEMENT IMPLEMENTATION SCHEDULE 1986-90 (PENDING ADDITIONAL FUNDING)

LEGEND

-Aquatic Habitat Inventory-

- ▲ Stream Inventory
- ■ Lake Inventory
- ● Water Quality Monitoring
- ⬢ Stream Habitat Assessment

-Aquatic Habitat Rehabilitation-

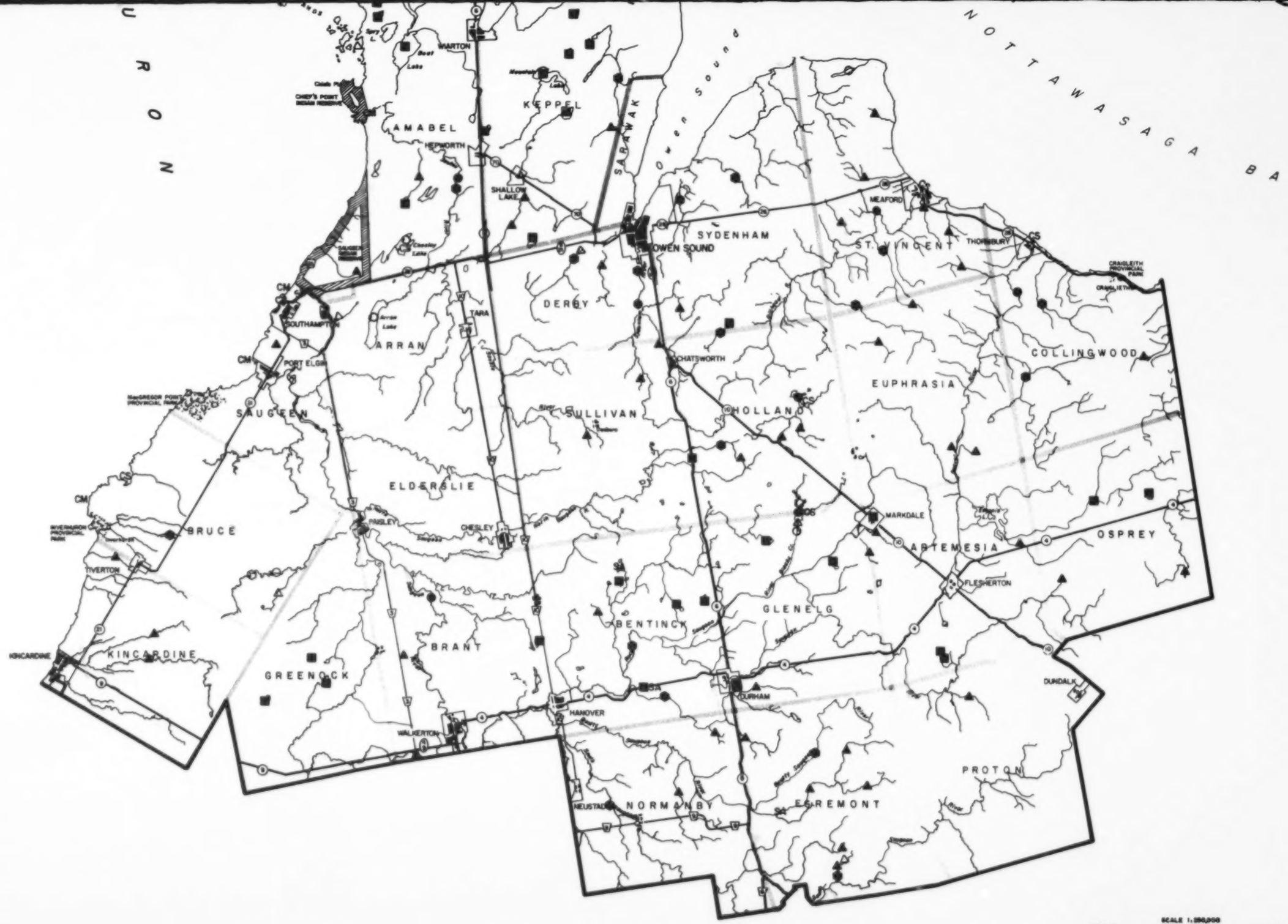
- △ Lake/Stream Rehabilitation

-Fish Population Management-

- □ Spring and/or Fall Fishway Operation

-Fish Population Assessment-

- ○ Index Netting
- ⬡ Spawning Studies
- CS Creel Census
- SA Stocking Assessment
- CM Contaminant Monitoring


HURON
NOTTAWASAGA BAY
Owen Sound
WARTON
CHIEF'S POINT INDIAN RESERVE
AMABEL
KEPPEL
SABAWAK
HEPWORTH
SHALLOW LAKE
MEAFORD
SYDENHAM
OWEN SOUND
ST. VINCENT
THORNBURY
CRAIGLEITH PROVINCIAL PARK
SOUTHAMPTON
DERBY
TARA
ARRAN
CHATSWORTH
COLLINGWOOD
EUPHRASIA
PORT ELGIN
MacGREGOR POINT PROVINCIAL PARK
SAUGEEN
SULLIVAN
HOLLAND
ELDERSLIE
PAISLEY
CHESLEY
MARKDALE
ARTEMESIA
OSPREY
BRUCE
INVERHURON PROVINCIAL PARK
TIVERTON
FLESHERTON
GLENELG
BENTINCK
KINCARDINE
BRANT
GREENOCK
DURHAM
DUNDALK
HANOVER
WALKERTON
NEUSTADT
NORMANBY
EGREMONT
PROTON
SCALE 1:250,000
MILES
KILOMETRES